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**NATIONAL INTELLIGENCE**

**Jack Zlotnick**

**INDUSTRIAL COLLEGE OF THE ARMED FORCES**  
**Washington, D.C.**

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## THE INTELLIGENCE COMMUNITY

### The Army Example

*effective opening*

Intelligence is collected and analyzed on many command echelons. An infantry company in the field conducts scouting and other observational activities in its immediate area of operations. The commanding officers of battalions, regiments, divisions, and armies similarly rely on intelligence -- either developed by their own G-2's or received from other echelons -- to support them in the execution of their missions. There may at times be an unhappy duplication of activities by the intelligence units in the hierarchy, but the desirability of giving intelligence support to the operational commands at all levels is not seriously questioned.

Before World War II, the highest echelon of intelligence in the United States was the departmental level. Military analyses were produced by the War and Navy Departments and political analyses by the State Department to assist the respective secretaries in the discharge of their responsibilities. Estimates produced by say the War Department did on occasion go beyond a mere review of military considerations to take in other elements of the situation as well.



For the character of war in the twentieth century and of the tensions between wars called increasingly for assessments of military capabilities, not in isolation, but in conjunction with economic strength, state of scientific achievements, political intentions, and psychological vulnerabilities. The War Department, however, was then clearly giving its views on matters in which other agencies might claim a greater competence, and presumptive departmental bias of its estimates tended to vitiate their acceptability. The need was clear for a mechanism to provide the President and those who assisted him in formulating national policy with coordinated intelligence analyses on matters which transcended the competence of a single department -- in short, with national intelligence.

#### World War II Arrangements

World War II struck home the urgent requirement for improved intelligence support to those who formulated national strategy. Pearl Harbor was a clear failure of intelligence; the choice of target was a complete surprise. The failure was much more one of intelligence assessment than of collection. Enough information was at hand to make it clear that the Japanese were preparing to break off relations

with the United States. But in the absence of a sophisticated analysis of the information acquired, no responsible official was led to appreciate the possibility of an imminent attack on Hawaii. Despite the victory over Japan, the stamp of Pearl Harbor remained indelible on the American consciousness. The Hoover Commission in 1955 observed, "The CIA may well attribute its existence to the surprise attack on Pearl Harbor."

Even before Pearl Harbor, the President took the initiative to develop the machinery for producing national intelligence. In July 1941, the Office of the Coordinator of War Information was set up with a charter to collect and analyze strategic intelligence and furnish the results to the President and other agencies. The office was transformed after Pearl Harbor into the Office of Strategic Services (OSS). Strategic intelligence, pertaining as it does to the capabilities, vulnerabilities, and probable courses of action of foreign nations, covers much the same ground as national intelligence, in that both types are commonly addressed to the top officials charged with formulating and executing national policy. In the strictest sense of the term, however, strategic intelligence can be conducted on the departmental or other level without being offered, like national



intelligence as the coordinated view of the intelligence community. Nevertheless OSS was a literal ancestor of CIA and so a landmark in the development of the community for producing national intelligence. OSS made a lasting impact by the stimulus it gave to the use of scholarly techniques in the intelligence analysis. It recruited academicians by the hundreds, many of whom served as officials in successor intelligence agencies and were among the first to articulate a doctrine of intelligence to encompass the organization and activities of the national intelligence community.

OSS did not effect the interagency coordination required to dignify its analyses with the designation of national intelligence. The synthesis of intelligence during the war was rather centered in the Joint Intelligence Committee of the Joint Chiefs of Staff. OSS was represented on the JIC along with the Department of State, the Foreign Economic Administration, and the military services. It is questionable whether even the centralized intelligence [performed] under the JIC could strictly be called national intelligence, since its purpose was to support the requirements of the Joint Chiefs of Staff rather than the nation's officials above the Joint Chiefs' level. Joint collection groups staffed by civilians and military officers were set up in the various military theaters. The joint effort was also successful in bringing out a good compendium of data on terrain, targets, population and other items of basic

intelligence in the JAFIS (Joint Army-Navy Intelligence Studies) compendiums. But no continuing mechanism was evolved for the production of composite intelligence reports which focused on the enemy's staying powers for the period between the end of the war, and policy makers drew on historical records for background on these vital issues of the day.

### Post-War Changes

It was widely appreciated that the wartime intelligence structure was makeshift, but there was widespread disagreement at the end of the war on the best institutional arrangements for intelligence production. In some quarters, there was advocacy of a single centralized agency. Elsewhere, a centralized agency, which might increasingly arrogate to itself activities traditionally performed by the intelligence organizations within the military services, was viewed as endangering the fulfillment of military missions. The nature of the compromise finally evolved was foreshadowed in January 1946 when the President issued an executive order setting up a National Intelligence Authority composed of the Secretaries of State, War, Navy and the President's personal representative. The National Intelligence Authority served in the nature of a board of directors over a Central Intelligence Group, which operated under two basic principles. First, its mission was principally to coordinate the intelligence produced in the various departments of the government.



second, it was to perform only those other functions which the National Intelligence Authority decided should best be performed centrally.

These two principles for the production of national intelligence were retained by Congress in 1947, when it passed the legislation that provides the statutory charter for the intelligence community as it is organized today.

National Intelligence as a fully delineated rather than embryonic form may be dated from the National Security Act of 1947 (amended in 1949). One provision of the act set up the Central Intelligence Agency to integrate the intelligence produced within the executive departments so that it might serve the makers of national policy. Even more important, the act originated the National Security Council, which exercises the greatest influence under the President in the integration of the nation's military and foreign policies and serves as the principal consumer, so to speak, of national intelligence. In the business world, there can be no sustained investment in facilities to produce goods for which there is no market demand. In the government similarly, efficient services are not likely to be offered where there is no articulated demand for those services. The National Security Council has made insistent demands on national intelligence, and the intelligence community has steadily improved its skills in tailoring its product to the new market.

This orientation of intelligence to the requirements of national policy has been further encouraged by the Council's statutory authority over intelligence production. An understanding of the national intelligence process presupposes an understanding of the role of the Council.

### The National Security Council

The President presides over the meetings of the National Security Council. In addition, there are four other statutory members: the Vice President, the Secretary of State, the Secretary of Defense, and the Director of the Office of Civil and Defense Mobilization -- the last bringing to the meetings one qualified to help the policy makers assess the government's military and foreign commitments in the light of its economic and mobilization readiness capabilities. The consideration of economic realities on all matters of national strategy is further ensured by the invariable presence at Council meetings of the Secretary of the Treasury and the Director of the Bureau of the Budget, although these officials are not statutory members. In addition, the President on occasion invites other officials to sit in on meetings if the agenda includes items in which they have a special interest. Such ad hoc participants have included the Secretary of Commerce, the Secretary of Interior, the Attorney-General, the Ambassador to the United Nations, the Chiefs of Staff of the Armed Services, and others.



Two other officials participate in Council sessions: The Chairman of the Joint Chiefs of Staff and the Director of the Central Intelligence Agency. By statute, these are advisors rather than members of the Council. They present their views in their areas of competence but do not join in the final articulation of national policy recommendations.

The organizational structure directly under the Council reflects its three-sided responsibility. First, it must obtain the information it needs to support its policy recommendations. Insofar as this involves the collation of intelligence on foreign countries, the lawmakers considered it important to give the Council direct authority over the national intelligence process. The statute places the Central Intelligence Agency under the Council, with the Director of the CIA administratively answerable to the Council.

Second, the Council must "advise the President with respect to the integration of domestic, foreign, and military policies in relation to national security" to use the language of the statute. The formal instrument for implementing this function is the national security policy paper, which is prepared for Council consideration by the National Security Council Planning Board. This Board is composed of representatives, at the assistant secretary level, from the same agencies represented on the Council itself. Thus Planning Board members are drawn from the Departments of State, Defense, and Treasury, and the Bureau of the

Budget; advisers from the JCS and the CIA, and ad hoc participants from other agencies like AEC when their special interests are involved.

Applications from Communist countries for U.S. loans, rising Arab nationalism in the Middle East, and the Chinese Communist menace to countries allied by mutual defense treaties with the United States are examples of situations that could occasion policy papers.

The first draft of a policy paper, prepared perhaps at the direction of the Council or at the initiative of one of the departments is normally written in the department having major interest. At the Planning Board, the draft may be considerably modified in an effort to reconcile the views of other departments. The CIA representative on the Planning Board, like the Director of CIA on the Council, is not a party to these efforts to articulate policy. His role is rather to provide a distillation of the pertinent intelligence drawn from previously prepared National Intelligence Estimates and from analyses produced since the last formal estimate was written.

The policy paper draft, as rewritten by the Planning Board is passed on up to the National Security Council. The Council's task becomes the more difficult when disagreements in the Planning Board prove irreconcilable. The Board must spell out the areas of disagreement, and a further effort to find a common ground for divergent viewpoints is made in the Council.



The third major area of NSC responsibility is to determine that the national policy objectives are being effectively implemented by the executive agencies of the government. For this purpose, the Operations Coordinating Board (OCB) has been set up under the Council. Like the Planning Board, OCB roughly parallels in membership the Council itself. OCB keeps under continuous review the activities assigned to the various departments in furtherance of national security objectives. This could call, to set up a hypothetical example, for a review of the progress made in getting economic aid shipments to say Turkey, of the status of military aid shipments, of negotiations relating to military bases, and of the volume and quality of Voice of America broadcasts. Along with this review of the operational activities of the government agencies charged with implementing policy, OCB draws on intelligence to determine if these operational activities are securing the desired results. The intelligence analysis provides OCB with such information as the foreign policy orientation of Turkish leaders, economic conditions in the country, popular morale, and resistance capabilities to Communist subversion. OCB's findings are passed up in periodic reports to the National Security Council.

#### The Role of Intelligence in Policy Making

In the National Security Council, and in its subordinate organs, the Planning Board and the Operations Coordinating Board, the intelligence

representatives avoid the impropriety of taking a position for or against specific policies. Their role is to provide the required intelligence; it is for the representatives of the operating departments to recommend policy. This meticulous drawing of the line between national intelligence and national policy is, in large part, a derivative of practice on lower echelons. Intelligence conventionally provides the commander with information on such matters as dispositions and intentions of the enemy. But intelligence on the enemy is only half the information the commander must consider in appraising his own relative capabilities. Only the commander is privileged to have all the information and only the commander is privileged to make the final decision on his strategy.

The reluctance of intelligence to intrude on policy is reinforced by the apparent intent of Congress to create a national intelligence community that would not subserve the particular interests of any one of the executive departments of the government. <sup>Departmental</sup> Intelligence estimates in the past had often been suspect for "budgeteering", that is to say, of assessing enemy capabilities in a manner that in effect constituted special pleading. Naval intelligence was thought likely by some quarters to exaggerate an enemy's vulnerability to sea blockade. Air intelligence was charged with a tendency to overestimate the strength of foreign air forces. Thoughtful observers saw a disconnection <sup>in</sup> between intelligence and investment counseling by brokers who stood to gain large commissions by marketing stocks.

To keep the line between policy formulation and intelligence support, the 1947 act specifically distinguished between the role of those who serve in the NSC as "members" and the role of the intelligence representatives who acts as "advisers".

In conformity with the prevailing doctrine that intelligence must keep its distance from policy making, there is generally a scrupulous avoidance in intelligence analyses of any appearance of "G-2-ing U. S. policy." The analyses may offer conjectures of enemy intentions; they do not second-guess U. S. dispositions, least a critical examination of U. S. courses of action come close to an implicit recommendation of the wisest course to follow.

The obvious weakness of such analyses is that enemy intentions are in major part a function of U. S. intentions and capabilities. The Japanese decision to attack was not in itself a complete surprise to those privy to intelligence information in December 1941. The prevailing opinion, however, was that if the Japanese struck, it would be in the Philippines or elsewhere in the Far East. The choice of Pearl Harbor as the first target was unexpected. It is problematical that intelligence analysts who were knowledgeable of U. S. dispositions and capabilities could have made a better estimate of the situation. But it is clear that a worthwhile estimate of the enemy's choice of targets entailed some knowledge of U. S. capabilities and probable courses of



in each of the possible target areas.

In practice, intelligence analysts have to keep as well informed as possible on the situation at home. They assess Soviet scientific capabilities for example, with due appreciation of the fact that what will be tried in the Soviet Union depends heavily on what has been demonstrated in the United States. Insofar as the Russians are strongly motivated to show that they can outdistance the United States, an estimate of Soviet intentions in outer-space exploration entails a knowledge of U. S. progress and intentions in the field.

The necessity for intelligence analyses that have a realistic regard of U. S. policies is further recognized in estimates which explicitly examine the probable effects of alternative U. S. courses of action. Assessments of the economic situation in Yugoslavia, for example, may be made under varying assumptions of the level of U. S. aid. Soviet intentions in Europe or Chinese Communist actions in the Far East may be similarly estimated under explicitly stated alternative assumptions of U. S. courses of action.

The "hands-off policy" injunction is again relaxed to permit intelligence to evaluate the results of policy decisions already taken. The effect of U. S. export controls on the Chinese Communist economy, for example, is accepted as a proper area for intelligence analysis. In such cases, the intelligence community very first itself with a decision.



responsibility for decisions to revise or reinforce past policies, despite the theoretical apartheid between intelligence support and policy decision making. A decision, Admiral Radford once pointed out, is an action that the executive must take when the answer does not suggest itself from the information at hand. When the information supplied seems so conclusive as to virtually suggest the proper answer, the philosophical distinction between intelligence support and policy decisions loses practical force.

A final word on the proper relationship between intelligence and policy must take note of the charge that policy has too often been determined without regard to intelligence assessments. This is a charge which had greater validity before the 1947 act, when the prestige of the intelligence estimate was not so high as it is today. Analysts may still be ignored because of mistaken assessments by higher echelons of intelligence. But the analyst today works with greater confidence than his counterpart of earlier years, that his findings will get to the ears of the leadership of the government. The National Security Act of 1947 has maintained an organic relationship between the policy makers and intelligence analysts. The intelligence estimate today carries great weight in policy making councils. And the intelligence community may far better apprise of the needs of policy makers, so that reports prepared on the initiative of individual analysts suggest the

...intelligence is far less a feature of current practice than it was formerly. The intelligence analyst today still shies from entering into the realm of policy, but his sense of usefulness is buttressed by the procedures that have made for a freer flowing channel between the intelligence community and the producers of intelligence.

### The Central Intelligence Agency

The Central Intelligence Agency performs the function of keeping the President and the Council on Intelligence Activities informed of the intelligence activities of the government and the world. The President establishes the CIA under the authority of the Intelligence Reform and Accountability Act of 2004. The President appoints the director of the agency with responsibility for the following: (a) monitoring the intelligence activities of the government and the world, (b) monitoring the intelligence activities of the world, (c) correlating and evaluating intelligence information, and (d) correlating and evaluating intelligence information relating to national security and providing for its dissemination. The following paragraphs will show the agency does itself make certain analyses "from scratch." Its primary responsibility, however, is to coordinate the analysis of the Department of State, the military services, and other agencies of the government and present the resultant product as the findings of national intelligence. This product may take the form of strategic estimates (say on the prospects of the Soviet Union over the next five years), of basic encyclopedias descriptions of (for example, religion, labor force, harbors, air force, governmental organization, transportation, etc.,) or of current intelligence assessments (the meaning of Khrushchev's

most disarmament proposal). The machinery for complete coordination must sometimes be by-passed in the case of current intelligence, where time pressures may call for quick preliminary assessments, but the rule is to incorporate the consensus where possible of the intelligence community at large.

In addition to its coordinating and correlating functions, the CIA is chartered by the act to perform for the rest of the intelligence community such services as the NSC determines are best performed centrally, as well as other functions relating to national security that the NSC may direct. Under this authority, the CIA engages in clandestine collection of information, which is disseminated to analysts throughout the government, and if the content warrants, directly to policy making officials. The monitoring of foreign radio broadcasts is also done centrally under CIA. In addition, the production "from scratch" -- as opposed to mere coordination -- of considerable economic and scientific intelligence has been centered in CIA under this authority. CIA also provides the central repository for all intelligence documents, the archives so to speak which the researcher can use for the expeditious recall on microfilm of thousands upon thousands of military attaché cables, foreign service dispatches, and other classified reports.

*Handwritten note:* CIA  
Collection  
Abroad



The United States Intelligence Board

As a staff adjunct of the National Security Council, the Central Intelligence Agency occupies a strategic position in the intelligence community. The other intelligence agencies, however, each have their individual areas of competence, and their views in these areas carry especial weight in CIA's efforts to reach a general consensus. This is sought at various echelons; the highest is the United States Intelligence Board, on which representatives from the following agencies of the intelligence community are represented:

1. Central Intelligence Agency. The Director of Central Intelligence presides as chairman at USIB meetings, which are normally held every week but which he can convene on short notice if the situation warrants. While CIA's role in matters of intelligence interpretation is in large part one of molding the estimates of other USIB agencies, it also propounds its own viewpoints in the general effort to reach a consensus. On economic and scientific intelligence, in particular, CIA originates a large part of the contributions to strategic estimates, and CIA viewpoints in these fields tend to carry the weight that the services carry in military intelligence and that the other USIB agencies carry in their special fields of competence.

2. State Department. Political intelligence as analyzed in the Department of State constitutes a major ingredient of national intelligence production. The personnel engaged in intelligence research in the

State Department are foreign service officers for the most part. When serving abroad, they generally provide the most informative reporting on political and economic conditions. Their reports are not products of intelligence operations but rather of information legitimately available to diplomatic personnel. Much of it is unclassified.

3. Joint Staff. "Joint" estimates -- the integrated production of Army, Navy, and Air Force intelligence -- are prepared within the JCS organization by the J-2 (Intelligence) Directorate of the Joint Staff. J-2 participates in the production of National intelligence estimates and other national intelligence production. It is headed by the Director for Intelligence, Joint Staff, who also represents the JCS organization on the United States Intelligence Board.

4. Army. Army intelligence carries the preponderant weight in national intelligence production dealing with matters relating to foreign ground force capabilities. Information on terrain, technical assessment of foreign weapons, and estimates of logistic capabilities all come within the domain of army intelligence. In many of their studies (for example the determination of foreign capabilities to transport troops by rail,) army intelligence officers must coordinate closely with analysts engaged in economic intelligence. The Assistant Chief of Staff for Intelligence is Army's representative on the USIB.

5. Navy. Naval intelligence provides the bulk of information relating to foreign naval capabilities, e.g., number of vessels by categories, firepower, personnel, morale. Naval intelligence is also drawn upon for studies of foreign harbors, potential amphibious operations targets, and information on foreign merchant marines. The Assistant Chief of Naval Operations for Intelligence is Navy's representative on the UNIB.

6. Air Force. Air Force intelligence is the generally accepted authority on foreign air strength. It also determines the vulnerability of foreign targets, target systems, and areas to air attack. The Air Force is represented on the UNIB by the Assistant Chief of Staff, Intelligence.

7. Federal Bureau of Investigation. The FBI's responsibilities are limited to domestic security, and its participation in national intelligence production is only occasional. It frequently disseminates to the other members of the intelligence community useful information which it has turned up in the course of its counter-intelligence activities.

8. National Security Agency. The interception and decrypting of foreign communications, today carried on by NSA, has on occasion provided the United States with information unavailable from other sources. The breaking of Japanese codes prior to Pearl Harbor revealed Tokyo's instructions to its diplomats in Washington.



9. Atomic Energy Commission. AEC carries the major responsibility for the production of intelligence in the field of nuclear energy. It is equipped technically to monitor nuclear explosions and is staffed with personnel trained to analyze all data on foreign atomic energy developments.

10. Department of Defense, Office of Special Operations. The Secretary of Defense is represented on the USIB by his adviser on national intelligence and counter-intelligence, the Assistant for Special Operations.

The USIB, which normally meets once a week, acts as a sort of board of directors of the intelligence community. The agendas of USIB meetings cover not merely matters of substantive intelligence to be presented to the National Security Council, but also the general problems of administrative relationships and assignment of responsibilities within the intelligence community. Since the heads of the various intelligence organizations are represented on the Board, the understandings reached at USIB sessions are generally effective in achieving a closer working relationships on the lower echelons. The general opinion throughout the intelligence community is that the definition of responsibilities approved by the USIB has gone far to eliminate uncoordinated friction in the production of national intelligence as an interdepartmental effort.

### Standing Committees of the USIB

The heads of the intelligence services who serve on the USIB can oversee only the broadest phases of interdepartmental intelligence production, and standing committees of the USIB have therefore been set up in a comparable role on lower specialized schemes. An example is the Watch Committee, chaired by the Deputy Director of CIA. Watch committee meetings, attended by representatives with their supporting staff of analysts from all the USIB agencies, assess current developments with a special eye on implications for the early outbreak of hostilities. Watch Committee conclusions are regarded as the most authoritative assessments in the absence of a "crash" national intelligence estimate, of the likelihood of imminent hostilities in any part of the world.

*Watch Committee conclusions are approved by USIB*

Another USIB standing committee of growing importance in recent years is the Scientific <sup>Intelligence</sup> Estimates Committee. With the services, AEC, and CIA responsible for different aspects of scientific and technical intelligence, assessments of foreign scientific capabilities generally require considerable interdepartmental coordination and final approval by the Scientific Estimates Committee.

*have changed recently*

Similar coordination in the field of economic intelligence is performed through the Economic Intelligence Committee. CIA analysts produce most of the economic intelligence on the Communist bloc, but analysts in the military services also prepare frequent analyses on such economic

areas as merchant marine transportation and extensive change of industrial installations as military targets.

Another example of a large standing committee is the National Intelligence Survey Committee, which has the responsibility throughout the intelligence community for "the synthesis of data" -- studies of terrain, religion, economy, political structure and other background features. CIA is charged with the work of incorporating the contributions from the various agencies into National Intelligence Surveys. The surveys, prepared and periodically revised for each country, are the "World Almanacs" of the intelligence community.

*Add a  
note that individual  
members of the  
committee set up to  
deal in other phases of  
intelligence.*



II

THE INTELLIGENCE PROCESS

The phases of national intelligence duplicate the phases of intelligence on lower echelons - e.g. collection of information, analysis of data, and dissemination of conclusions. The national intelligence process, however, is complicated by the very scale of its activities. The analysts are separated - at times by continents - from the collectors, so that national intelligence calls for essential liaison activities and machinery for reconciling the requirements of decision makers with the capabilities of collectors. By contrast, the intelligence process at the lowest combat level, where the collector may simply be a soldier detailed to man a forward observation post and report his findings to the battery commander, is an ideal of simplicity. The commander in this case understands the capabilities of the collector and can levy his requirements with no more than the usual difficulty that oral communication entails. The decision maker in this case is also the analyst; he both assesses the reports of the soldier and decides what to do about it.

On a somewhat higher level, an officer may be assigned to receive information from several forward observation posts. The analytical and decision making process are now partly separated. The officer evaluates the reports received from the soldiers at their posts in terms of consistency with each other. The battalion commander must still assess this information in terms of consistency with other data received and draw his conclusions on enemy dispositions and intentions.

On a still higher level, an intelligence component of a unit examines the information received and gives the view of the probable sources of action open to the enemy. On this level, the intelligence organization's secrets of information are far more exclusive than those usually open to lower echelons. On this level, however, the specialization of labor among collectors, analysts, and decision makers becomes sharply defined and troublesome problems of communication among the specialists arise.

#### Requirements

As the organization becomes more complex, a machinery for requirements is found desirable to facilitate communication among personnel in the various stages of the intelligence process. The need for intelligence information may arise at any level; we may take as illustrative a need arising at the decision making level -- say of a Voice of America radio broadcast programmer who wants to know how well Doctor Zhivago is selling in South Asia and how closely government officials, military officers, and university students there are following the tribulations of Boris Pasternak. In the likely event that this information is not immediately available, the intelligence producing organizations will be asked to provide it.

The information may be readily at hand in the files of the intelligence analyst. If so, the task is relatively simple; the analyst simply brings his

talents to bear on the assembly, evaluation, and presentation of the data in a manner -- say a short memorandum -- useful to the radio programmer. The whole process from the initial levying of requirements by the programmer to his receipt of the finished memorandum may be completed in a few hours.

When there are gaps in the analyst's files and the deadline for his memorandum permits, he will levy requirements on the collectors for the missing information. Even if there is no likelihood of a timely response from the field, the analyst may levy his requirements anyway as a hedge against future demand for the same information or because the answers should be responsive to his standing requirements for information bearing on popular attitudes toward Communism.

These standing requirements, incorporated in so-called collection guides, specify the broad categories of subjects about which there is a continuing need for information: accomplishments or failures in fulfilling national economic plans, morale in the armed forces, radar defenses, signs of factionalism in the governing political party, for example.

The voluminous flow of information from the field in response to standing requirements often presents the analyst with an embarrassment of riches, embarrassing particularly because they do not provide the specific information he needs at the moment. The analyst stands to



be further embarrassed, however, if he leaves his request only to be told that the answers have been previously forwarded. The essential preliminary to the formulation of requests, therefore, is to ascertain that the answers are not already available. This means then a check with other analysts in whose files the information desired could conceivably be found. It means in addition a check with the reference services in the Central Intelligence Agency, which by electronic data processing methods can quickly retrieve from its files microfilm copies of intelligence documents received from all agencies of the intelligence community.

The analyst who decides to go ahead and levy requirements is under the strongest obligation to explain his needs clearly to the collectors. The "anything you have on Boris Pasternak" type of requirement is likely to elicit a flow of irrelevances. A useful adjunct of a good requirement is some background to suggest what is already known in order to help the collector approach his task as a man who is at least well informed if not necessarily an expert on the subject. The questions that follow the background information will indicate specific lines of inquiry for the collector; for example, what statements about the affair can be reliably attributed to individual government officials, what was the nature of discussions on Pasternak following his arrest lectures at the military command and staff schools, what communications appeared in student newspapers, in book reviews?

The analyst will also suggest the field office that considers best equipped to gather the information. In this case, the services of more than one are clearly called for. South Asian government officials may have spoken about Pasternak in the course of conversations with Foreign Service personnel; the State Department is one obvious choice to receive the requirement. The military services, whose attaches have occasion to talk to South Asian officers, should also get the requirement. CIA's clandestine service may also be asked to help; but the rule is not to ask for cover collection if overt collection will do the job.

Normally, the analyst does not advise the field collectors on procedures for obtaining the needed information. On occasion, however, he is in a position to suggest a good lead. Knowing for example of several South Asian university professors who have just arrived as visiting lecturers in the United States, he may propose these as sources who could give informed responses to well worded queries.

With a specific priority (urgent, routine, etc.), the requirement is sent through channels to the appropriate collectors in the field.

After a day or two of further thought to the matter for the

analyst, the requirement comes to the analyst.

Time away from his principal preoccupation with subversive activities to help the field expand its collection effort. The clandestine services, in

particular, are eager for the analyst's appraisal. Since these sources include many of untested reliability. The retention or dismissal of these informants depends often on the consistency of their reports with other data available to the substantive experts at headquarters.

Servicing the responses may also entail supplemental requirements by the analyst. In our Pasternak illustration, the visiting lecturers may allude to a flood of letters to the editor which appeared in one of the South Asian literary reviews, and a request to the field for copies of the periodical may be in order.

An initial spurt of collection activity on behalf of the analyst will usually be followed by sporadic reports which become less and less frequent as the weeks go on. Eventually, Voice of America programmers must turn to more timely matters as world comment on Pasternak dies down, and the analyst decides to "close out" his requirement. The overcautious analyst who procrastinates in taking the final close out step, is a trial to field collectors, who usually have more requests for information than they can fulfill in detail.

#### Collection

In modern intelligence organizations, the analyst's "in-box" is filled daily with the information that has been gathered for him by a far flung network of collectors. The in-box is the analyst's mail box, so to speak, to which is delivered the counterparts of the magazines,



newspapers, and other information media that keep the well-educated American an informed citizen. The intelligence analyst is thus able to follow his assigned work as a sedentary, low life insurance risk rather than the cloak and dagger figure of television reporters.

The picture of the intelligence analyst in the scholarly research role is rendered still more fitting by the nature of data he usually prefers to work with -- overt or semi-overt. <sup>He doesn't</sup> Not that he desires to use the product of clandestine collection; in some cases he prizes it as the only intelligence available. But usually he finds that overt sources provide the greater part of the reliable information open to him. In many cases, the conclusions reached by the intelligence analyst are not appreciably different from those that would be reached by scholars drawing on the information available in their university libraries.

1. News services. Intelligence organizations in the free and Communist worlds subscribe to or monitor the press services. Reuters, AP, or UPI tickers often print the first news of a Latin American revolt, the resignation of important officials, the text of a communique released at the end of a state visit. Many an analyst has had to leave his warm bed in the early morning hours to prepare his quick assessment of a news scoop ticking over the press wires.

During more relaxed working hours, the analyst can take advantage of the wealth of data offered daily in the newspapers, both foreign and

domestic. The despatches from news correspondents in London, Berlin, Hong Kong, Jakarta, Moscow, and other cities are not always in accord with information in intelligence files, but the quality of reporting compares favorably with the average of intelligence information that comes through the in-box. Insofar as information from news sources is concerned, the intelligence organizations in the Communist world have of course all the advantages. "I would give a great deal," Allen Dulles has said, "if I could know as much about the Soviet Union as the Soviet Union can learn about us by merely reading the press."

2. Foreign publications. Collected either by subscription or by purchase in foreign countries, these publications make up a valued component of the intelligence take. The Communists since the death of Stalin are publishing considerably more detail in their economic and technical journals. At the 20th Party Congress in February 1956, the then premier Khrushchev urged the Soviets to "reduce secrecy measures to allow a freer exchange of information and opinion."

Despite the relaxation of Soviet security, prompted in large part by the propagandistic advantages of publicizing technical achievements, many Soviet scientific and technical journals are published in a limited number of copies, which rarely leave the USSR. By contrast, with virtually unlimited access to open source trade publications and scientific journals, the USSR can keep relatively well informed on the status of the US guided

missile program, the construction details of the St. Lawrence Seaway, atomic reactor and electric power installations, rail and highway tunnels. For a small fee, the Russians can obtain technical descriptions of inventions from the US Patent Office.

The time lag between publication and arrival at the in-box limits the usefulness of foreign publications as current intelligence. Their principal serviceability is to provide details which can be assembled and incorporated in research studies. In the absence of many foreign publications, the intelligence services often found their research tasks exasperatingly difficult in World War II. A Japanese language, who's who was published in 1940, for example, contained 150,000 short biographies. Apparently no one in the United States requested a copy before Pearl Harbor, and resort was necessary during the war to another Japanese who's who, which contained only 7,000 biographies. One of the major reasons for this in the intelligence services is their dislike of propaganda.

Another difficulty is the difficulty of obtaining a copy of a book or article. It is not possible to obtain a copy of a book or article from a foreign publisher unless the publisher is willing to sell it. This is often the case with books and articles which are of interest to the intelligence services. The intelligence services often find it difficult to obtain a copy of a book or article from a foreign publisher unless the publisher is willing to sell it.



be as significant as their content. Did Peking make any special broadcasts last month calling for the "liberation" of Taiwan, or did the number of broadcasts devoted to this theme reach a new high?

4. Domestic collection. It is not always necessary to go abroad to collect intelligence on foreign countries. Americans with informed persons in this country occasionally pick up information of value. The Hungarian revolt enlarged the number of intelligence sources in the United States by the influx of refugees. Letters from families made available by immigrants to this country have provided useful details on conditions abroad. Only a small percentage of businessmen, government officials, and others who visit foreign countries call their stories for publication. The others are generally willing to recount their experiences to interested listeners. Sometimes travellers report conversations with foreign officials who apparently intended that their remarks would be passed to others in the United States. The information is none the less of interest to the intelligence analyst on that account.

5. Diplomatic collection. Foreign service officers cannot engage in any activity that savors of espionage, but in the discharge of their official duties, they must often forward information that is of highest importance for national security. In 1940, the Baldwin cabinet in London was jolted into expanding the British air force by Foreign Secretary Sir John Simon's account of his conversation

with Hitler. The Fuehrer told Sir John that Germany had already achieved air parity with Britain and Germany would go on building until its air force was as large as those of Britain and France combined.

The diplomatic reports from the U. S. Embassy in Tokyo provided vital information on the developing tensions in the Pacific. In January 1941, Ambassador Grew wrote:

A member of the Embassy was told by my . . . colleague that from many quarters, including a Japanese one, he had heard that a surprise mass attack on Pearl Harbor was planned by the Japanese military forces, in case of "trouble" between Japan and the United States; that the attack would involve the use of all the Japanese military facilities. My colleague said that he was prompted to pass this on because it had come to him from many sources, although the plan seemed fantastic.

Where the United States is not represented, intelligence information may still be forwarded through diplomatic channels. In Communist China, for example, the regime may communicate through the British charge or the Indian ambassador information intended for American ears.

6. Attaches. Like foreign service officers, attaches are able in pursuit of their legitimate functions to collect intelligence information without recourse to clandestine methods. Invited to observe maneuvers, to visit installations, to exchange such data as training manuals, the military attache is able to gather and forward military information of a wide variety.

The military attache can be a particularly useful collector in a country where the army is or threatens to become a force in politics.

In the course of his official associations, the military attaché may then become the recipient of information of high political significance.

In addition to military attaches, civilians also serve as attaches in U.S. embassies abroad, -- agricultural attaches, for example.

The impact on the American consciousness of recent scientific progress has resulted in an increase in the number of scientific attaches serving abroad. The information collected by the civilian attaches is overt but none the less valuable in economic and scientific intelligence production.

7. Photography. Motion and still pictures are highly regarded in such applications as target analysis or the computation of plant capacities. While some of the pictures must be taken covertly, others are free for the clipping from such propaganda periodicals as China Pictorial. Many are drawn from the travel recollections of private citizens. Pictures taken by a traveler to the Solomons before World War II formed a useful portion of the intelligence available to the First Marine Division when it went into Guadalcanal in August 1942.

Aerial photography is most frequently used in wartime, when it has often paid its cost many times over. Aerial photography, for example, revealed the location of German rocket launching ramps at Peenemunde. Subsequent RAF bombing delayed production of the German missiles for months.

8. Clandestine collection. The drawbacks of clandestine collection are several. First, it is costly both in terms of money and risk.



Second it is time consuming if the clandestine service does not have agents in place and must therefore plan its project, recruit agents, train them, and place them. Third, great confidence can only infrequently be placed in the accuracy of the information collected. Many agents fabricate; many offer themselves to more than one country; most have such limited access to the information they seek that they can forward only intelligence fragments of limited usefulness.

In view of those handicaps, clandestine collection is encouraged only if the information cannot be obtained by overt means. However, on several occasions clandestine collection has yielded outstanding results. The USSR was notably successful after World War II in stealing atom bomb secrets through the services of such skilled agents as Bruno Pontecorvo and Allan Nunn May. In World War II, the butler of the British ambassador in Turkey transmitted to the Germans photographs of documents which gave details of Allied strategy. Fortunately for the Allied cause, the Nazis failed to act on the intelligence in the belief that it had been planted by the British.

As a security measure to protect its sources of information, reports from clandestine services describe the agent only in very general terms, e.g. "a university student who is a member of the Young Communist League and might have access to the incident he recounts." To aid the analyst, such reports generally contain the analyst's evaluation of the source's reliability and its own appraisal

of the accuracy of the information supplied. The field evaluation is expressed by a letter-number rating in accordance with the following key:

| <u>Appraisal of Source</u>      | <u>Appraisal of Content</u>   |
|---------------------------------|-------------------------------|
| A. Completely reliable          | 1. Confirmed by other sources |
| B. Usually reliable             | 2. Probably true              |
| C. Fairly reliable              | 3. Possibly true              |
| D. Not usually reliable         | 4. Doubtful                   |
| E. Unreliable                   | 5. Improbable                 |
| F. Reliability cannot be judged | 6. Truth cannot be judged     |

This rating is sometimes the only guide the analyst has to the credibility he should attach to the report. At other times, he can assess it against other confirming or contradictory information in his files.

8. Communications intercepts. British interception of the famous Zimmerman message in 1917 was one of the important events of that year leading up to United States entry in World War I. The message from Berlin's foreign minister contained instructions to the German Ambassador in Mexico for opening negotiations with that country and offering it the opportunity to recover its "lost territory in Texas, New Mexico, and Arizona."

#### Information Processing

The growth of collection is now so large that the efficiency of the intelligence process rests to an increasing extent on the skills of the

reference service. The intelligence analyst can store in his own individual files only a small part of the documents that flow daily through his service. For the remainder, and for the still larger part that by-passes his service, he rests his trust in the reference service which operates the central repositories where all incoming information is classified and filed. The flow of intelligence information from the collectors to the analysts is generally synchronized with the flow of copies to the reference services.

The initial task of the reference service is to index incoming documents by a numerical code according to subject (commercial airfields, railroad transportation, treaties), area (Laos, North Vietnam, Senegal), source (air force, foreign publication, clandestine service), security classification (secret, confidential, unclassified), and date of information. A document which treats of more than one subject or area must accordingly be recorded under several number codes.

The documents themselves are generally microfilmed. Punched cards and electronic data processing permit of rapid retrieval of the microfilm copies upon the analyst's request.

Useful as is the reference service in the recording, storing, and recalling of information, its machine assets also enable it to go a step further by synthesizing data in response to specific requests. Thus, for



target analysis, data processing techniques can quickly produce a listing of large industrial installations in a specified city. Or they can come up with a listing of Soviet scientists who have been reportedly engaged in nuclear energy research. While these applications of automation are hardly likely to displace the analyst, they stand to relieve him of some of his onerous data assembly duties and leave him freer for interpretative analyses. Increasingly, it is the reference service rather than the analyst that comes up with the information-ans-analysis answers which are often called for (percentage of Chinese cotton production that goes into padding for clothing and bedding).

Utilizing these obvious advantages of automation, the reference services can also publish general listings designed to economize the number of special requests. One such aid may be a Who's who of scientific personnel; another a virtual Dun and Bradstreet record of foreign industrial firms.

#### Analysis

The conventional description of intelligence as it comes from the collectors is "raw intelligence" or "intelligence information". It is not "finished intelligence" until it has gone through the stages of evaluation and interpretation by substantive experts. In cases of urgency, raw intelligence may be passed directly to decision makers. The failure to report to the army commander in Hawaii the sighting of a two-man

Japanese submarine in Pearl Harbor about an hour and a half before the Japanese attack was one of several instances preceding the disaster. When time permits, however, -- and this means in the great majority of instances -- it is finished intelligence rather than intelligence information that goes to the decision makers.

Analysis in intelligence has broad similarity to the process in academic research. One of the distinctions is that the academician is freer to examine theory and principles. While a grounding in say economic theory is of considerable advantage to the economic intelligence analyst, he must be responsive to needs of the "consumer," and his research is necessarily oriented toward terms of hardware and other assets and liabilities, not to ivory tower studies of theoretical equilibria.

The academician can direct his research toward subjects on which he has reason to believe information is available for the seeking. The intelligence analyst is compelled by consumer demand to analyze a situation where the gaps of knowledge are uncomfortably wide. This means that the intelligence analyst is called on to offer tentative conclusions that the academician would withhold pending additional data. For policy decisions cannot await complete information; complete information is rarely available.

Another distinction is the usefulness over time of academic and intelligence studies. Few intelligence studies have long-time usefulness.

Reappraisals and revisions are constantly in order to keep the studies current.

A final distinction is one which causes much psychological distress to many intelligence analysts. The sociologist can publish and make a name for himself. The intelligence analyst is by comparison nameless. His studies are unsigned, their circulation restricted. He is unable to make his mark in the circle of subject or area specialists he wants eagerly to impress.

Reconciled to anonymity, with restricted opportunity to enjoy the pride of authorship, the intelligence analyst should in addition display other qualities prized by the sponsoring office.

1. Expert knowledge. In the junior analyst, this can be developed through experience on the job; it is the essential attribute of the senior analyst. The senior analyst on Latin America understands Spanish or Portuguese, has worked or traveled in the area, is as well grounded in its affairs as any member of a university faculty. Expert knowledge is not altogether a function of age. Some lines of special knowledge are more likely to be found in young men and women. The relatively recent graduate is more apt to understand the techniques of inter-industry statistical analysis than economists of an older generation. Students of Chinese Communist theory were more readily found in the postwar generation of Sinologists than among the "old China hands." The younger rather than



older physicists have kept up with recent advances in electronics. Seniority, on the other hand, has its advantages for the supervisor, who must understand the general structure of a problem which cuts across several fields.

2. Humority. The analyst is under strong psychological if not heavy handed pressure to support conventional prejudices. One suspects that this pressure is a greater trial to analysts in Communist countries. But there are many instances of such pressure elsewhere. The intelligence organization of a government-in-exile for example is under constant drive to overanalyze signs of popular discontent at home. In the United States, variances among estimates prepared by different departments of the government have frequently reflected pressures on analysts to back up their departments' special interests.

3. Imagination. "Genius," observed William James, "in truth means little more than the faculty of perceiving in an unhabitual way." A characteristic failing of many experts whose talents fall short of genius is their disdain of imaginative hypotheses. Conclusions must be grounded in evidence, but hypotheses must first be entertained and tested by the evidence. The cavalier rejection of hypotheses by experts has been responsible for the persistence of error in a multitude of cases. The French Academy of Sciences took years to concede the impropriety of its arrogance in rejecting the thesis that meteorites originated in outer space.

4. Articulateness. The intelligence analyst must communicate his findings to the decision maker. Some decision makers prefer to be briefed orally; some insist on statements which do not exceed a page in length. The analyst must be able to tailor his presentation to his medium. He will generally have the assistance of an editor to clarify his prose, but under "flap" circumstances, he will have to articulate his thoughts quickly and clearly without editorial polish.

5. Alertness to detail. The volume of data moving across the analyst's desk is normally so large that he is in danger of missing important details. The ideal analyst is the Sherlock Holmes genius who can perceive the significant in the mass. Is it a reflection of a man's standing in the party if he is referred to as first secretary one month and First secretary later? Is a worn, tired reticence indicative of loss of power? There is a real danger of <sup>over</sup> analysis and drawing of unwarranted conclusions from such fragments of indications, but the keen intelligence officer is alerted to further lines of investigation and perhaps to the desirability of new requirements on field collectors.

The analytical process in intelligence varies with the office. The professional intelligence analyst (economic, scientific, military) is often engaged in research studies akin to doctoral dissertations. The current intelligence officer, with his quick assessments of daily developments, is akin to the newspaper columnist. The estimator officer has

to integrate the contributions of several departments so that a general consensus rather than his own personal view emerges. These distinctions notwithstanding, certain phases appear common to the analysis process in all intelligence offices.

1. Defining the problem. The analyst must have terms of reference. These may be specified for the estimator in guidance from policy makers ("We need an estimate on Chinese Communist intentions toward Southeast Asia"). Or they may be redefined for the functional analyst who is to contribute to the estimate ("We'll need backup on Communist China's prospective food harvests and population growth"). Or it may be clearly indicated to the current intelligence analyst by the same source that guides the journalist in deciding what is newsworthy ("I'd better hurry down to the office and get off some quick paragraphs on the meaning behind the Kremlin's new blast at Tito").

2. Assembly of data. The analyst's own files are usually the first place he goes to for the background he needs. Our current intelligence analyst, for example, will look to his files for copies of earlier Soviet blasts at Belgrade and compare their tone with the latest attack. Because of the pressure of time, his own files may in fact be the only recourse open to him for the moment. The analyst researching China's food production, on the other hand, can look also to the files of other analysts, to the resources of libraries, and to the automatic data processing machine to recover documents stored in the intelligence community.



3. Evaluation. The analyst must judge his data in terms of internal consistency and in terms of consistency with other known data. Are Communist China's harvest claims consistent with the statistics of acreage, with weather reports, and with estimates of reasonable crop yields? How does a report of troop movements square with the field evaluation of the source's reliability?

One of the analyst's most dangerous pitfalls in the evaluation phase stems from his own conservatism -- his reluctance to accept information which does not square with his own stock conceptions. One of the intelligence community's preconceived concepts during World War II was that the prewar mobilization of the German economy left little slack for further expansion over the short run. Actually, German war production increased steadily until mid-1944. The estimate of one U. S. agency that German war output went up rather than down in 1943 was rejected by many informed analysts at the time.

"False confirmation" of data is another hazard to the analyst in the evaluation phase. Reports received from several collectors are often traceable to one ultimate source. The various reports should be regarded as one. The danger of false confirmation becomes especially high when a foreign government deliberately fabricates reports to throw off enemy intelligence. A classic example of such deception was the British "Operation Mincement," which involved spurious messages

recovered from the body of an Englishman off the coast of Spain during World War II. The mosaic of pooled Nazi intelligence and resulted in the change of Germany's Mediterranean defense plans in the expectation of an Allied assault against Sardinia and Corsica. The deception saved thousands of Allied lives when the landings came in Sicily.

4. Study and Interpretation. Having assembled the data and decided which is valid and acceptable, the analyst must construct the mosaic which will answer the terms of reference given at the outset of the analytic process. Our researcher into Chinese Communist harvest has assembled data on past agricultural production of specific crops. He has also assembled whatever information is available on the regime's economic objectives as declared in annual and five year plans. He has assembled data on the success or failure in meeting previous agricultural targets. From his study and best interpretation of the data, he makes his own projection of Chinese Communist harvests. He balances this against food requirements as calculated from a projection of population growth.

5. Presentation. Intelligence information is not "finished intelligence" as such, with interpretative commentary, in a form that can be communicated to other persons. Sometimes, this communication is effected through oral briefings. The Director of Central Intelligence, for example, briefs the National Security Council regularly on current intelligence developments. More often, finished intelligence is presented

in writing, which can take forms ranging from single page memoranda to detailed studies accompanied by maps and other graphic aids.

### Dissemination

The term dissemination of intelligence is intended to mean its distribution to persons entitled to receive it. It is a term used by collectors to refer to the distribution of raw intelligence and by analysts speaking of the distribution of finished intelligence. The mechanical process is similar in both cases. The duties of dissemination are entrusted to a service component, which uses routine couriers or, if circumstances dictate, special couriers, teletype, and other electric means of transmission.

The collection office in particular is constantly confronted with the decision to "dissem" or "no dissem," since a large part of the take is obviously of marginal value to analysts and may be useful only to develop a file which will ultimately permit an assessment of the source's reliability or efficiency. While analysis offices sometimes decide to make "no dissem" out of finished intelligence studies, such studies are generally undertaken in the expectation that they will yield conclusions worthy of publication and circulation.

In the dissemination phase, both collection and analysis offices must decide how wide a circle of readers will receive the intelligence. In part, this decision can be based on the security classification placed



on the report; if it is top secret, it will obviously not be circulated among those who have only a secret clearance. In addition, the dissemination decision is governed by the "need to know" rule; that is, regardless of his security clearance, a person should receive only the information he needs for the efficient discharge of his official responsibilities.

Both these rules serve as necessary security safeguards, but they can be prejudicial to national security interests if applied over-rigorously. The joint congressional committee on the Pearl Harbor investigation condemned the over-cautious circulation of intelligence derived from the decrypting of Japanese codes. The committee observed that "the fact the Japanese codes had been broken was regarded as of more importance than the information obtained from decoded traffic. The result of this rather spurious premise was to leave large numbers of policy-making and enforcement officials in Washington completely oblivious of the most pertinent information concerning Japan."

### III

#### CATEGORIES OF NATIONAL INTELLIGENCE

National intelligence in the United States may be distinguished by two features:

1. It is intended to serve the formulators of national security policy.
2. Its content, transcending the exclusive competence of a single department or agency, is presented as the consensus of the intelligence community.

Since national policy is not designed to be a shifting guide to action but rather to serve as a standing precept over a considerable span of time, intelligence is needed that will afford rather long range foreknowledge of the capabilities, vulnerabilities, and probable courses of action of foreign nations. Such intelligence is usually presented in the form of a "strategic estimate". When prepared at the national level as a composite of the views of the intelligence community, it is produced as a National Intelligence Estimate.

Strategic estimates customarily take weeks or months to prepare. In the interim between the appearance of the estimates, the National Security Council looks to reports of current intelligence developments. It is on current reports rather than strategic estimates that the NSC would probably have to rely to provide the sort of advance warning that was so notably missing before Pearl Harbor.

The factual information resulting from the collation of encyclopedic data -- basic intelligence -- is customarily produced for the use of other analysts but may on occasion provide needed background information to high level officials. When prepared as the integrated product of the intelligence community, it appears in a publication which has been officially designated as national intelligence (National Intelligence Survey). Basic studies will accordingly be reviewed in this chapter as a third category of national intelligence.

All three categories -- strategic estimates, current reports, and basic studies -- are based on analyses prepared in the various departments and agencies by military intelligence officers, economists, foreign affairs analysts and other functional specialists. These functional studies are designated in conventional usage as military intelligence, economic intelligence, political intelligence, biographic intelligence, etc. The responsibilities for their production are assigned by the NSC to the various departments and agencies: ground forces intelligence to the army, political intelligence to the State Department, biographic intelligence on naval personnel to the Navy, for example; a review of such functional intelligence production requires consideration of activities below the national intelligence level and is reserved for the following chapter. Functional specializations are many and are not reviewed in depth. Economic intelligence is examined in most detail because of its special



interest to Industrial College of the Armed Forces students.

The Strategic Estimate

The National Intelligence estimate is the most authoritative expression of national intelligence today. Preliminary expressions of view by the intelligence community may go to the National Security Council in other analyses. The considered view of the community -- reached in most cases only after protracted deliberation -- is to be found in the formal estimate.

The function of National Intelligence Estimates is to suggest where the world is heading. This requires an examination of the present situation and a projection of expected trends over the period of the estimate. The length of the estimative period varies. A general estimate of the Soviet Union over the next five years might be regarded as appropriate to support policy decisions relating to the national posture toward international communism. A special estimate brought on by another crisis over the status of Berlin or the Chinese offshore islands, might be expected to project Communist courses of action over the next six months.

The shorter the estimative period, the more trying becomes the task of the estimators. A five-year projection permits of successive corrections of intelligence and modifications of policy as the estimates are periodically brought up to date. The shorter-range estimates, on the other hand, may be all too quickly tested by events; the margin for error is

narrower. Strategy in games can be modified if the play seems to be going against the individual. But if the game permits only of one or two rounds of play, the initial strategy is an all important determinant of the outcome.

#### 7 Defining the Problem

The initial task of the estimator is that described in the previous chapter as the first step in analysis, namely, defining the problem or setting forth the terms of reference. If the estimate is to project the main trends in a foreign country over the next five years, the terms of reference will cover the specific political, economic, and military issues that bear on decisions of long range policy. With respect to the internal political situation, for example, is the present leadership stable? If the government is authoritarian, is its chief expected to die and is his death likely to result in a struggle for the succession? What will be the role of the military in such a struggle, of the political party or parties, of other loci of power?

What can be said about popular attitudes? The estimate here, in addition to some necessary generalities, will outline the sentiments of specific groups in the population -- intelligentsia, workers, peasants, national minorities. If there is widespread hostility to the government, will this manifest itself in passive discontent, in sporadic riots, in sustained armed resistance?

Particular interest attaches to the section of the terms of reference relating to foreign policy, since it is the developments in this area which may impinge most directly on US security interests. The estimate will be expected to assess present and prospective relations with allies, popular and official attitudes regarding the balance of forces in the world, and the nature and force of convictions relating to suitable principles for dealing with East-West tensions. Here again generalities will be supplemented by discussions of attitudes on specific issues, for example on military bases abroad, German unification, UN membership for Westing. For while generalities are useful, they must not conceal the aspect that the degree of support for or opposition to the United States will vary with the issue involved.

The terms of reference on economic issues will probably indicate an interest in policies relating to the allocation of resources. Is investment to be proportionately greater or less in the military support industries, in consumer goods industries, in agriculture. What projections can be made regarding the absolute level of defense expenditures, of total and per capita private consumption? How will changes in yields and exploitation of new lands affect crop harvests? What geographic shifts are foreseen in the location of industries?

The rate of economic growth, as calculated from estimates of gross national product, may be singled out as a good indicator of economic



viability. In the dynamic economy, this rate of growth is expected to exceed the rate of population increase by a significant margin.

Economic relations with other countries will be examined for their possible bearing on the country's political orientation in foreign affairs. Is trade increasing with other members of the Communist or free world? What commitments have been made for receiving or extending foreign economic aid? Relative rather than absolute figures usually provide the better criteria for appraising the leverage which economic relations may exercise on political orientation. The proportion of total foreign trade consisting of commerce with a particular country is more meaningful than the absolute level of trade.

If the country is a potential antagonist of the United States in armed conflict, especial care will be taken in setting forth the military terrain of reference. The conventional questions will be asked about the size, equipment, and proficiency of the land, air, and naval forces. These overall aggregates will be supplemented by an examination of capabilities in different geographic areas. In addition to review of men and hardware, there may be a summary of current military doctrine in the country. What seems to be its thinking on such issues as surprise attack, on limited versus total war, on the military organization and weapons mix best suited for the needs of the day?

In today's world, the military strength of the country is a function in growing measure of scientific and technical capabilities. If the country

surveyed is one of the more developed in the world, there will be a detailed appraisal of the state of research and technology in missiles, atomic, atomic energy applications, electronics, long range aviation.

#### Strategic Stature

If the terms of reference are suitably defined, the estimate is in a fair way of being able to portray what Eisenhower has called the "strategic stature" of the country, that is, the amount of influence it can exert in international affairs. This influence may be exerted by employing or threatening to employ military force, by economic reprisals or blandishments, by moral suasion, or by propaganda. This influence varies in accordance with the country's identifiable assets (as sought out by the terms of reference): friendships in the international community, military and nonmilitary strength in being, ability to mobilize forces and resources in emergencies, resiliency in catastrophes. This influence is limited by the country's liabilities: exposed geographical positions, popular dissatisfaction, unstable leadership, economic backwardness. Its common border with the USSR is a noteworthy liability of Finland. The sympathy of neutralist nations for Yugoslavia is one of its assets.

#### Intentions and Capabilities

If the National Intelligence Estimate went no further than to outline the country's strategic stature, it would still constitute a valued intelligence study. It must however come to grips with the "64 dollar"

question, the probable courses of action. While intelligence has proved far from infallible here, the estimator can make a claim to something better than mere soothsaying. For one thing, he knows what the country's leaders have declared their intentions to be. If they say they are going to modernize the military establishment, he may choose to accept the statement as an indication of their true intentions.

Second, the estimator knows that intentions in reasoning men are limited by capabilities. Estimates of Chinese Communist intentions to take Taiwan by military force will be governed by prior estimates of Communist capabilities to provide the amphibious lift needed for an attack.

Sometimes, the prognostication of a probable course of action is so difficult that the estimator has no recourse but to limit himself to an analysis of capabilities, noting that the exercise of the capabilities cannot be excluded as a reasonable possibility. To some extent, this statement of capabilities is an implied estimate of intentions, since estimators reject the consideration of capabilities whose exercise appears outlandish or clearly counter to national objectives, e. g. the British capability to assault Berlin. The statement of capabilities comes closest to the assessment of intentions when "net" rather than "gross" or "raw" capabilities are considered. Gross capabilities are estimated without reference to possible counteraction e. g. Country A has the capability to commit



150,000 troops in an attack on Country B. Net capabilities are contingent, e.g. Communist China can take over Outer Mongolia if the USSR does not intervene. Given Peking's estimate of Soviet commitments to Ulan Bator, such a statement of net capability is almost equivalent to an estimate of Communist China probable course of action towards Outer Mongolia.

Another resource of the estimator, when the evidence is insufficient to support a flat prediction, is to identify the alternative courses of action that are consistent with a country's capabilities and policies. Country A, for example, can commit its armed forces to a full scale military assault on Country B during the period of the estimate; or it can limit its military actions to border incidents and threatening troop movements; or it can step up its harassments by a combination of propaganda, economic, and diplomatic pressures. If, on balance, the weight of the evidence suggests that one course of action is more probable than another, the orders of probability will be given.

An intelligence estimate is undoubtedly the weaker for having to allow for more than one possibility and leaves the estimators open to the charge of acting, the oracle whose prophecies seek to cover all contingencies. Their best defense may be to point to the statements of orders of probability. Their only other defense is that a flat prediction in the absence of supporting intelligence is even more the mark of the humbug.



Intelligence does no service for policy makers by overstating its knowledge. It is as important to identify what is not known as what is. History is replete with instances of inaccurate estimates based on insufficient information. Many analysts near the close of World War II understood that too little recent information was at hand to appraise the qualities of Japan's Kwantung Army in Manchuria. Informed opinion in the government however, was betrayed by the reputation for fighting strength which the Army carried with it from its pre-war days, and the entry of Soviet forces into Manchuria was urged. Actually, the best units of the Kwantung Army had long been transferred out to more important theatres of the Pacific.

The overcautious estimators are in fact not those who are chary of flat predictions but those who seek a "margin of safety" in forecasting the worst. If the worst does not eventuate, all heads will remain on their shoulders. If the worst happens without forewarning, on the other hand, the inevitable post-mortems will find their scalps in the intelligence community. The mettle of the estimators is most severely tested when the overt actions of a foreign country extend to a militant display of force and when the background evidence suggests that the country will probably stop short of full scale hostilities. Even with the proviso that hostilities are possible, it takes qualities beyond those found in the situation to affirm that, on balance, war appears improbable.

#### PRODUCTION PROCEDURES

The mechanics of producing a National Intelligence Estimate ensure high responsiveness to the needs of the policy makers and the consideration of as much information as can possibly be brought to bear on the problem. While a schedule of production and revision ensures that estimates on the most important countries are kept reasonably current, a good many estimates are prepared out of schedule on the suggestion of important policy officials. An estimate may also be prepared to provide the necessary background for a policy paper under review in the NSC's Planning Board.

The estimate initiated, all the agencies that will contribute (CIA, State, Navy, Army, Air Force, etc.) agree on the scope of the problem and the areas of study to be allocated to each agency. In the next several weeks (less if the situation necessitates), the basic research and initial analyses are completed by the contributing agencies. The Central Intelligence Agency fuses the contributions, and a first draft emerges which necessarily distorts points made by some of the contributors if unanimity of view on all points was lacking.

to start with. Redrafts and interagency meetings and perhaps more redrafts may be called for before a final paper is worked out.

Approval by the United States Intelligence Board is the final preliminary to publication as a new National Intelligence Estimate.

While this procedure may seem cumbersome, it does have the virtue of assuring that the best information and the best talents in the government are brought to bear on the most important of intelligence productions. The time involved in the procedure is not overlong when one considers that it will provide part of the rationale underlying the nation's policies for years. The time involved, moreover, can be telescoped on occasions of especially urgency. National Intelligence Estimates have been prepared and approved by the United States Intelligence Board in a matter of hours.

The danger of such intelligence production by conference and committee lies not in complexities of procedure but in overzealous efforts to hammer out a consensus. This could result in "lowest common denominator" intelligence to irritate rather than inform the policy makers. If all contributors to an estimate except one believe that that Country A will probably be increasingly antagonistic to Country B, the substitute of "may" for "will probably" is often a wording that all might agree on. An alternative course would be to reject surface

forbids. There is a rule of reason that obtains in the matter of dissent: quibbles about phraseology must not obscure the fact that all are in agreement on the general thrust of the argument. Dissents should reflect firmly held differences on important questions. When such differences are irreconcilable, current practice is to allow dissents in the estimates rather than compromise on a watered down wording.

The National Intelligence Estimate is not analogous to a Supreme Court decision, by which lower courts must abide. Nevertheless, in the stamp of highest authority impressed upon the estimate, there lies the hazard that it may freeze viewpoints throughout the intelligence community. Criticisms and comments from authorities must be invited after the estimate is published. On occasion, the criticisms will effort a fresh look at the estimate and result in changes when the estimate is next revised.

With an eye to the next revision, the estimators themselves must critique their own efforts, noting particularly where they were handicapped by intelligence gaps. In a few cases, these gaps can be filled by more intensive collection efforts in the field. Whatever assistance the field can offer, intelligence analysts at home will bend their efforts to initiate research in the areas indicated to the



and that successive revisions of the estimate become more convincing approximations to reality.

Procedures for preparing the National Intelligence Estimate may be modified with time, but there is no sense at the moment for radical changes. In the post-war period, the National Intelligence Estimate has given intelligence a more powerful role than it ever had before. More than any other intelligence publication it has promoted the acceptance of national intelligence as an essential ingredient of national policy.

### Current Intelligence Reports

As constant crisis becomes the standard feature of the international scene, the urgent need by policy makers to keep abreast of day to day developments makes increasing demands on national intelligence. These demands are met by the needs of current intelligence production, which are not far removed from those employed by American journalism to report current events.

1. Raw intelligence. This is equivalent to the radio or television announcement, "we interrupt this program to report that the USSR has just announced the first successful launching of an artificial satellite that is orbiting around the earth. Keep tuned to this station for further details." When the watch officer on duty in a current intelligence office during the small hours of the early morning receives information of such import that he believes it should be passed quickly to higher officials, he will do so without interpretive analysis. He may also explain that the desk analyst is being called in and that interpretive comment will follow shortly. The startling of high officials by the rapid dispatch of vital information -- with or without analysis -- is an essential function of the current intelligence offices.

2. The written memorandum. This format is employed for analyses which are not conveniently accommodated in regularly scheduled publications. One reason is that of time: the daily publication

has been put to "bed," it is too late to reverse the process, but high officials must have the information and conclusions before them as quickly as possible. The written memorandum also serves as the outlet for the analyst who wishes to express a point that may be too speculative for formal publication but nevertheless deserves consideration. Sometimes, when there are differences of view among analysts of an agency, the interchange of memoranda is a preliminary to the achievement of consensus.

3. The oral briefing. The oral briefing is frequently used to save time. The desk analyst reads the intelligence information and hurries over to the higher official's office or home to give his quick estimate of its significance. Sometimes oral briefings are regularly scheduled for the benefit of officials who like to get at problems through the person to person back and forth of question and answer. The Director of Central Intelligence regularly briefs the National Security Council on current intelligence developments.

4. The daily publication. The aforementioned media for disseminating current intelligence do not lead themselves to the inter-agency coordination required for the production of true national intelligence. They rather present the point of view of a single office or analyst. Intelligence produced on the national level appears in the

for oral publications. Members of the National Security Council and other high officials, for example, receive copies of a daily report in whose production the various member departments and agencies of the intelligence community participate jointly. This is the daily newspaper, so to speak, of the intelligence community, with the distinction that interpretative commentary is a more prominent feature of the intelligence publication than of the front pages of the news daily. In the case of current intelligence, the pressures of time are frequently a handicap to the production of complete analyses on a coordinated inter-departmental basis, and policy officials find the analyses published by the individual agencies a valuable back-up to the joint product.

5. Other periodic publications. The weekly, biweekly and monthly current intelligence publications, analogous to the magazine supplements of the large city daily, summarize and analyze recent events from a vantage point which provides better perspective than is possible when writing for the daily publication. Here too, policy officials lean heavily on analyses produced by individual agencies. However, some standing committees of the United States Intelligence Community produce periodic publications containing the views of the intelligence community as a whole on current intelligence developments.

6. The intelligence community estimate. This estimate is prepared not only for the President and his staff but also for the Secretary of Defense and the Joint Chiefs of Staff. It is a summary of the intelligence community's views on the current situation in the world, and it is a key document in the intelligence community's work.



proportions, the National Security Council or the United States Intelligence Board may direct that a National Intelligence Estimate be prepared quickly to present the consensus of the intelligence community.

### The Current Intelligence Analyst

The outstanding characteristic of current intelligence production is the demand it makes on the analyst for speed. Like the newspaperman, he must meet a publication deadline every day. The cases in which he is called on to research in depth are rather the exception than the rule. A large part of his activity consists in describing a development and commenting briefly on its significance, all perhaps within the limits of a single page. He may, for example, report the resignation of North Vietnam's <sup>secretary general</sup> ~~secretary~~ <sup>of</sup> ~~the~~ <sup>North Vietnam's</sup> ~~Communist~~ <sup>party</sup>. By way of comment, he may briefly give some biographic background on the new ~~secretary general~~, determine on the basis of other posts retained by the former ~~secretary general~~ whether the resignation signifies loss of real power, indicate who of his associates may have suffered a loss of stature along with him, and suggest who is likely to benefit. If the former ~~secretary general~~ was closely associated with certain policies of the regime, the analyst may offer some speculations on how these policies are likely to be modified.

The analyst's comment has a two-fold function: first to provide the reader with the background (e.g. biographic data on new ~~secretary general~~) which will set the basic report in fuller perspective, and second

suggest what further developments may follow. The background function is simple enough for the analyst who is on top of his job. The preliminary function is of quite another order of difficulty, and the current intelligence analysis, like the long-range strategic estimate, often proposes orders of probability rather than flat predictions.

The library and reference service, which can be extensively employed by the researcher working on a long project, are of limited value to the current intelligence analyst who may have to prepare his comments within the hour. He will possibly have time to phone other analysts in the intelligence community who might have information on the subject. By and large, however, he is left largely on his own personal resources -- the data he has accumulated in his immediate files and the knowledge in his head. The current intelligence analyst must therefore be the substantive expert in his area. He does not have time to learn while working on a project. He must rather bring the knowledge he already has to bear on his analysis.

The necessity for quick analysis places a premium not only on substantive knowledge but also on verbal fluency. The current intelligence analyst has to write well while writing quickly. The importance of writing aptitude is so high, in fact, that many senior officials prefer to hire as apprentices current intelligence analysts young men with writing aptitude who will learn the substance of their fields rather than

substantive specialists who have difficulty with verbalization.

From the foregoing, it is apparent that the person who takes to current intelligence analysis is continually sensitive to signs of change. Yet, he is unconsciously aware that, like the financial analyst who does not identify a bull or bear market until it is under way for some time, he too will not often identify a trend at its very inception. Liberalization during 1956 in the Communist world was aborted following the Hungarian revolt and other demonstrations of popular unrest in Eastern Europe. The shift toward orthodoxy was all the more difficult to identify because of crosscurrents in the Communist camp. Mao Tse-tung was preaching the virtues of letting "100 flowers bloom" months after the shift from liberalization had begun in the Communist world at large. To revert to our stock market analogy, industrial stocks were sliding while the rails were still heading up, and it was hard to establish that a bear market was in the making. The acute analyst is the one who identifies the trend before the public at large.

The sixth sense which the current intelligence analyst hopes will quickly tell him the direction of developments is a compound of background knowledge and constant scanning for significant details. He has something of a newspaperman's nose for what is newsworthy. The failure of important officials to make public appearances is the classic if overworked example of the information the current intelligence analyst

is constantly on watch for. If a new politburo and central committee has just been elected, he is quick to note the order in which the members are listed. He is more than other analysts the slave to his index. For his work is never to guess what is happening now and always to explain what is happening now in the light of what happened before and as an augury of what will happen later.

### Past Failures of Current Intelligence

Post-mortems reviewing past failures of current intelligence frequently show that the weaknesses lay not so much in the unavailability of information as in faulty analysis. "It is often harder," Allen Dulles has said, "to use the product than to get it." A case in point is the Raststedt Raid of December 1944, when the Germans launched an attack with 24 infantry and armored divisions on a 80 mile front to a depth of 60 miles. Sufficient information was collected prior to the assault to show that extensive German preparations were under way, and intelligence at the army level did in fact predict the attack several days in advance. Intelligence at higher levels, however, reversed the judgment, concluding that the Germans were most probably only strengthening their defensive positions.

On some occasions, the failure of current intelligence was attributable to the failure to convince policy makers. Stalin, for example, took a consistently negative attitude towards reports indicating



an imminent German attack in 1941. Hitler, similarly, ignored forewarnings of the Anglo-American landing in North Africa.

The most disastrous failure of current intelligence in US history was the unexpectedness of the Japanese attack on Pearl Harbor. Here again, there appears in hindsight to have been sufficient information available to alert intelligence officers and policy officials. There was, however, no full appreciation of the significance of the information. There was, further, a failure to get the intelligence information to all the quarters that should have had it. It was known, for example, that the Japanese consulate in Honolulu was sending messages to Tokyo on the location of ships in Pearl Harbor. It was known in early December that the Japanese embassy in Washington had been ordered to burn its communications codes. It was known that Tokyo had told its diplomats in Washington that a deadline had been set for the completion of negotiations with the United States. It was known that the Japanese were continuing negotiations in Washington in early December for the purpose of averting American suspicions. It was known that Japanese military doctrine set great store on the virtue of surprise attack. It was, however, the general assessment in Washington that Japanese military action, if it came, would be in the Far East. It was, moreover, not deemed necessary to keep the military commands in Hawaii fully apprised of the intelligence information collected. As a consequence,

there was no appreciation in Hawaii of the ominous significance of developments just prior to the attack on 7 December, such as the entry of a two-man submarine in prohibited waters off Pearl Harbor and the appearance of unidentified planes on the army radar screen.

### Indications Analysis

Pearl Harbor impressed many intelligence analysts with the need for developing a doctrine for identifying the symptoms of impending attack. A study of past wars, together with some introspection on logical courses of action in future wars, will soon suggest to any thoughtful person some likely symptoms: instructions to burn codes, withdrawal of financial reserves held in foreign banks, recall of merchant shipping to home ports, official warnings that specified acts will be followed by retaliation, call-up of military reserves, accelerated stockpiling of strategic materials, intensification of vituperative propaganda, to name a few of the more obvious symptoms. None of these are essential preliminaries to an attack, and all of them may appear without necessarily presaging hostilities. Their appearance, however, must serve as an automatic alert to the intelligence community.

The sophisticated analysis of these symptoms requires also a recognition of evidence which points to the continuation of peace: the deposit of funds abroad, demobilization of armed forces, withdrawal of troops from frontiers, cessation of bellicose propaganda, to name a few examples. The analyst here is under constant restraint to be on guard against deliberate deception. While a break in the

diplomatic negotiations between the United States and Japan before Pearl Harbor would have been a suggestive symptom of early hostilities, the continuation of the talks was hardly reassurance to the contrary. It rather represented Tokyo's effort to allay American suspicions while the Japanese fleet was steaming toward Pearl Harbor.

The watch for symptoms -- or indications, to use the favored terminology -- has virtually become a specialization within the current intelligence specialty. The indications approach is a counterbalance to the experts predisposition to reject deviations from known trends until new trends have been firmly established. This is a predisposition which is likely to be reinforced by the experience that such an expert turns out more often to be right than wrong, just as the weatherman in many climates can be more often right than wrong if he always predicts today's weather for tomorrow. Unfortunately, the analyst who is unconsciously given to this sort of pragmatism is most likely to be wrong when it is most important to be right. The responsible area analyst values the stimulus of the indications specialists who is disposed by his function to wild surmises and, like a Socratic gadfly, forces the expert to examine carefully -- and not cavalierly explain away -- each new symptom of impending hostilities.

The area analyst's particular contribution, in turn, derives from his expert knowledge of background evidence outside of pure indications

intelligence. Intensification of civil defense training, for example, is susceptible of offensive or defensive interpretation. The preferred interpretation will depend in large part on considerations of setting and milieu. Would opposition political parties stand behind the government in a war situation, are economic development objectives a discouragement to military adventures at this time, does the country enjoy the full backing of its allies?

#### The Watch Committee and National Indications Center

Indications analysis is in large part a constant watch for the steps which a country short of war readiness must take to be ready to strike. Its usefulness diminishes insofar as the country in question is already on a war footing in a situation of constant crisis. Its limitations are particularly obvious in small areas of localized tension, where the capabilities for attack are complete and only the decision to attack is in question. Despite these shortcomings, indications analysis must be pursued as a necessary guard, though hardly a guarantee, against another Pearl Harbor. A considerable part of the national intelligence effort, therefore, is devoted to the search for symptoms of imminent hostility.

The mechanism for integrating governmental opinions on the significance of these symptoms into national intelligence analysis is provided by the Watch Committee, one of the standing committees of



the United States Intelligence Board. The Watch Committee is chaired by the deputy director of the Central Intelligence Agency, and its members are composed of senior officers of comparable rank from the other intelligence organizations. At its meetings, each symptom observed since the previous meeting is considered one after the other and a conclusion reached regarding its bearing on national security. The conclusions, published in a report as the consensus of the intelligence community, represents an authoritative determination of prospects in the coming days as is the National Intelligence Estimate of longer range prospects.

Working under the Watch Committee on a round the clock basis is the National Indications Center, composed of indications specialists from the various departments and agencies. The Center is the constant recipient from the departments and agencies of all intelligence suggestive of possible hostile intent, together with their evaluations. This intelligence is collated in the Center as a basis for the agenda of the next Watch Committee meeting. In addition, the Center engages in continual analysis of its own based on its long experience with indications patterns in past crises.

The machinery for current intelligence production, including indications analysis, reflects the ever growing appreciation of the need for advanced warning. The machinery is yet to be tested fully, but it has

been called on to function in recent "Yla" situations (Suez and the Chinese off-shore island crisis, for example). The importance of its role in national intelligence is not seriously questioned in an age where the time required between the launching of an attack and the delivery of the blow is being steadily compressed. Under these circumstances there is little alternative to the development of techniques that will provide all possible forewarnings of decisions to strike.

### Basic Surveys

The most critical gap in American intelligence during the planning of operations against the Gilbert Islands in 1943 was the lack of precise hydrographic data. The available charts were so out of date and inaccurate as to be worse than useless. Tide tables were extremely sketchy. Yet information on the surrounding waters was vital to the success of the proposed amphibious operations, which would involve decisions on such matters as, the best type of landing craft to get the troops ashore with minimum danger of capsizing or grounding. The intelligence gap was never satisfactorily filled, and a considerable part of the heavy casualty list on Tarawa was attributable to the inability of landing craft to traverse the reefs off the landing beaches. The American dead on Tarawa lay as mute testimony to the vital importance of accurate basic intelligence.

of  
A synthesis of the fundamental facts and features that make up the character and body of a country and its people, basic intelligence is not changeless but not changeless. Like the World Almanac and the Encyclopedia Britannica, basic intelligence handbooks must be periodically revised. By and large, however, basic intelligence is relatively stable because it is largely descriptive and comparatively

static rather than dynamic in presentation. Its time range is from past to present, as contrasted with current and estimative intelligence which is vitally concerned with the present and likely developments in the immediate or near future. This is not to say that basic intelligence is devoid of analysis. Like the better encyclopedias, it also interprets the data it presents.

In modern times, basic intelligence has been called upon to make valued contributions to military planning, and most European countries have long supported a considerable basic intelligence effort. Sherman Kent's outline of the table of contents of a German handbook suggests some of the general areas of study which basic intelligence encompasses.

**I. GENERAL BACKGROUND. Location. Frontiers. Area.**

**History. Governmental and Administrative Structure.**

**II. CHARACTER OF THE COUNTRY. Surface Forms. Soils.**

**Ground Cover. Climate. Water Supply.**

**III. PEOPLE. Nationalities. Language. Attitudes. Population**

**Distribution. Settlement. Health. Structure of society.**

**IV. ECONOMIC. Agriculture. Industry. Trade and Commerce.**

**Mining. Fisheries.**

**V. TRANSPORTATION. Railroads. Roads. Ports. Airfields.**

**Inland Waterways.**



**VI. MILITARY GEOGRAPHY.** (Detailed regional breakdowns).

**VII. MILITARY ESTABLISHMENT IN BEING.** Army: Order of Battle, Fixed Defenses, Military Installations, Supply. Navy: Order of Battle, The Fleet, Naval Shore Installations, Naval Air, Supply. Air: Order of Battle, Military Aircraft, Air Installations (see List of Airdromes, etc. Special Appendix), Lighter than Air, Supply.

**VIII. SPECIAL APPENDICES.** Biographical data on key figures of the government, Local geographic terminology, Description of rivers, lakes, canals, List and specifications of electric power plants, Description of roads, List of airdromes and most important landing grounds, List of main telephone and telegraph lines, Money, weights, and measures, Beaches (as for amphibious military operations).

In post-war periods, extensive reliance has been placed on basic intelligence by those responsible for negotiating and administering the peace. The British delegates to Paris at the end of World War I, for example, were equipped with so-called peace handbooks, which summarized the ethnic, economic, and political problems of the areas which were to be affected by the redemarcation of new frontiers. The texts of treaties and other state documents were also included in the

handbooks. All the trouble spots of the continent were examined in historical perspective -- Alsace-Lorraine, Alsace, the Dardanelles. Similar background studies, in varying degrees of detail, were also available to delegates from other countries. Their preparation before all international conferences is essential if the delegates are to be equipped to discuss the issues intelligently. It is hard to imagine, for example, a disarmament conference whose delegates did not come fore-armed with basic intelligence regarding the armed forces strength of the other countries in both men and equipment, the positions of these countries on disarmament issues in past conferences, signs of softening or stiffening of their national policies and the prevailing military doctrines that would affect their preferences for one sort of arms limitation rather than another.

Basic intelligence handbooks also served in post-war periods as aids to military government personnel charged with administering the peace in occupied countries. Though the content of these books was not far removed from those employed to aid military strategy, they served dissimilar ends. Railroads, ports, industrial installations were now studied, not as targets for attack, but for their serviceability to occupying forces and for their essentiality to the occupied economy. Military government handbooks took note

of popular sensibilities that should not be offended rather than popular characteristics that might be exploited for social subversion.

The amount of basic intelligence accumulated over recent years is so large that only a part of it is contained in formal studies. The files of the intelligence community's central reference services are mines of information that can be collated on an as needed basis. Electronic data processing methods have blurred the distinction between the cards of the central reference services and so-called finished intelligence. For within the day, the cards can be run and rerun to yield printed listings with accompanying descriptive data of personalities and profitable industrial targets for military attack, to name but two of many possibilities.

The advantage of maintaining basic intelligence in a form that lends itself to automatic data processing is the ease of continuous revision. The listings of power plants, municipal utilities, pipelines, mines, celestial observatories, etc. contain all the data known to date, not merely the information available to the time the last handbook was written. This technique for basic intelligence presentation, however, is less useful when textual rather than tabular expositions are called for, as for example, in studies of social and psychological characteristics.

The battle for Tarawa was one of several occasions which highlighted America's lack of foresight before World War II in failing to build up its basic intelligence library. In the early war planning for North African operations, American officers had fortunate access to SIS (later Service Intelligence Studies), the coordinated basic intelligence studies of the British. It became apparent that a similar effort was needed for Pacific operations, and at the President's direction, the Joint Chiefs of Staff created a Joint Intelligence Study Publishing Board to produce the so-called JANIS (Joint Army-Navy Intelligence Studies). The JANIS volumes provided officials and intelligence research analysts toward the end of the war with detailed information on the historical, geographic, political, economic, military, and sociological backgrounds of the areas studied.

The JANIS volumes were a wartime stop-gap. It was widely realized that basic intelligence must be produced in peacetime and kept revised and ready for use in a national emergency. In addition, the qualified character of the post-war peace heightened the general receptivity to a basic intelligence efforts that would serve non-military operations such as propaganda, foreign aid planning, and economic



publication of a basic intelligence series called the National Intelligence Survey (NIS).

### The National Intelligence Survey

As in the case of a National Intelligence Estimate, members of the intelligence community contribute chapters to their special fields of competence to the National Intelligence Survey for each geographic area. The army, for example, is responsible for covering terrain features, the Navy for ports and harbors. The Central Intelligence Agency is responsible for coordination, editing, publication, and dissemination of the surveys. General policy and requirements with respect to the NIS program is set by the National Intelligence Survey Committee, a standing committee of the United States Intelligence Board.

The agency contributions to an NIS are, in most cases, organically separable and can be published separately rather than integrated into a composite production like the National Intelligence Estimate. In coordinating the contributions, CIA must check that they are consistent with each other, but there is not the wedding into an organic whole that characterizes the National Intelligence Estimate process. Similarly, when the surveys are revised, the revisions are edited and published subject by subject. For affording basic intelligence which is as

up-to-date as possible. This procedure has clear advantages over any that would delay publication of the entire NIS until all contributions were in.

In the decade or so since the NIS series was inaugurated, comprehensive surveys of basic intelligence have been prepared and published, subject by subject, for each of the major countries and most of the lesser countries of the world. The ones to which the surveys are put are varied. Intelligence trainees find them excellent for orientation in their new areas of responsibility. Diplomats study them with equal profit prior to their departure for new posts abroad. Analysts refer frequently to the surveys for ready answers to spot questions. (What gauge are the rail lines on Shikoku?) Military officers employ the surveys as standard references in the formulation of war plans. At the NIS level, the surveys are not studied in all their detail, but chapters giving an overview of a country have proved serviceable to high officials. The value of the National Intelligence <sup>Survey</sup> [Agency] is appreciated at all levels, both as a support to current operations and as an insurance against future Tarnas.

## **SUBJECT MATTER SPECIALIZATION**

National intelligence is a synthesis. It is compounded of information from virtually all the academic disciplines -- sociology, economics, political sciences, military history, the natural sciences, and others. Intelligence officers are obviously specialists in one of these categories, although they may be competent in more than one if their responsibilities happen to be limited to small geographic areas. Even in the latter case, it is rare for high competence in the social sciences to extend to the military and natural sciences as well, so that specialization by subject category is as much the rule in intelligence today as in the academic world.

National Security Council directives have established the responsibilities of each of the organizations in the intelligence community for producing the various subject categories of intelligence. Over the years, these categories have become differentiated by specialized techniques of collection and production.

### **Political Intelligence**

Peace, observed Clausewitz, is the continuation of war by other means. The military strategy and tactics of wartime give way to the political policy and maneuver of peacetime, and political intelligence

The principal obstacle to definitive political intelligence lies in

the nature of the field it covers; in only exceptional cases is it possible to quantify the data. Economic intelligence may not be the most accurate for the estimation of production and commerce. Military intelligence may be in error because the politicians to whomness in its arithmetic magnitudes of estimated troop strength. But accurate or erroneous, they provide numerical orders of strength and weakness. Estimates dealing with political dynamics, by contrast, deal with the immeasurable and the imponderable; the policy maker must accept intelligence which lacks the precision he would like. Poignant attitudes may be described as sympathetic or hostile, and no fine measures may be available to suggest the degree of popular hostility to a regime.

It follows that skill in verbalization marks the political analyst more than any other intelligence officer. His expositions are textual rather than tabular. Less able to draw on numbers, he relies on precision of language to communicate intelligence on the subject in his purview. A few illustrations will suffice to illustrate the range of this purview.

1. Loci of power. The equilibrium of a regime may rest on the precarious balance among the contenders for leadership. The political analyst strives to understand who and where are the centers of political power. In the jockeying that followed the death of Stalin, the relative



strengths of Malenkov, Molotov, Bulganin, and Khrushchev were not always self-evident. The influence of the army in political councils was sometimes in question. Although the Communist party is invariably the most powerful political force in the Soviet country, the prestige of the party varies among its members. Within the party, the Central Committee may at times exercise a true authority to which political rivals must appeal; at others it may be only the echo of a personal dictator.

2. Popular attitudes. The occasions when popular hostility is clearly revealed in the fierce glow of open revolt are comparatively infrequent. More often, the political analyst must sift a regime's claims of popular support and equally suspect charges of emotional oracles. The regime's own propaganda sometimes speaks the most eloquently on the subject. Harangues against "hooliganism" of youths, "conservatism" of peasants, "local chauvinism" of ethnic minorities, attest clearly to grievances and unrest.

3. Domestic programs. What is the progress of anti-religious campaigns? Of collectivization drives? Of literacy and education movements? Here the political analyst can sometimes quantify his intelligence by estimates of the amount of church lands confiscated, the number of peasants enrolled in collectives, the number of graduates from high level institutes. The political analyst is alert to advances and

restraints in domestic programs as they lend credit or discredit to the regime. He is also alive to shifts in the program for their bearing on the political fortunes of their sponsors.

4. Foreign policy. It is not to be taken for granted that anyone bears an interest in foreign policy. However, the political analyst is particularly concerned with the objectives of a nation. The political analyst keeps abreast of tactical shifts in such issues as disarmament, German unification, Arab nationalism, UN membership for Communist China, ideological conformity among the Communist satellites.

In view of the broad range of his interests, the political analyst has to be catholic in his use of collectible sources. Overt information (Khrushchev's speech denigrating Stalin before the 20th Party Congress, the texts of state commemorations, party pronouncements on doctrine) constitute perhaps the bulk of his background knowledge. The diplomatic cable or dispatch reporting conversations with foreign ministry officials is an essential source of information on foreign policy. Other commentaries from foreign service officers are also welcomed, coming as they do from knowledgeable students, who cannot engage in clandestine activities but whose legitimate duties keep them among the best informed on political trends. Reports from clandestine services are a necessary supplement to overt information on those subjects where official

freedom is the exception rather than the rule, e.g. popular unrest, jockeying by rival power groups, secret treaties.

### Biographical Intelligence

Our understanding of events is furthered by our knowledge of the men who shape them or who at the least participate in them. With every election, every revolution, every reshuffle of ministries, intelligence must be prepared to describe the emerging personalities: who they are, what they stand for. If the intelligence organization is on its toes, the job was largely done long before. For biographical intelligence entails not merely the accumulation of information on the prominent. It includes also personality dossiers on the obscure and the underlings, whose characters and experience are matters of record before they make the front pages.

Since it is impossible to keep a dossier of every one of the nearly three billion persons in the world, is biographic intelligence likely to draw a blank for individuals who become prominent overnight? In the case of persons who advance quickly to political power, the gaps are comparatively rare. The new faces that appear in politburo ranks after periodic reshuffles are not of people new to the party. They are of Communists who have made some mark in subordinate positions, perhaps in the provinces. If their previous jobs in the party were a matter of any record at all, their names must appear in the personality dossiers.

with military revolts that raise junior officers (say a Sergeant Batista) to power. But if the personalities involved are middle or high ranking, their downfall should be reasonably full. And if the revolution is any time at all in the making, biographical intelligence should not be taken by surprise. Castro was known in advance when the Cuban government fell in Cuba.

Much of biographical intelligence consists in the mere chronological tabulation of significant events in a man's life: his appointments to party and government positions, his resignations, illnesses, trips, notes on his presence or absence at public functions. No unusual analytical abilities are required to handle the compilation of such data. It is a job of typing and filing, cutting and pasting. The trained biographical analyst, however, is several cuts above a clerk-typist. Hardly content with a who's who enumeration of skeletal facts, he endeavors to portray the rounded man -- character, ambitions, opinions, weaknesses, friends, relatives, and particular allegiances in the network of cliques that may cut across the formal structure of party and government. He is prepared of course to give World Almanac answers to such questions as "Who is currently secretary of the Asian Solidarity Committee?" But he also stands ready to include premonitory elements in his report -- the nature of the policies to be expected from



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De Gaulle, for example, in the light of what the French leader himself  
has said and of other information compiled about him.

Useful as are the dossiers of middle ranking personalities against  
the day when one of them emerges into the limelight, biographic  
intelligence also needs to speculate before hand on the likely successors  
to top leadership. Who will follow the aging Mao Tse-tung as the  
leader of Communist China? While the elements of conjecture here is  
considerable, it is limited at least by the fairly narrow circle of likely  
candidates -- say the membership of the politburo, or narrower still,  
of the politburo's inner circle known as the standing committee. The  
principal difficulty is that, while the candidates are few, the outcome  
may hinge on the distribution of their supporters in the rest of the  
politburo, the central committee, and perhaps other organs of the  
party. Biographic intelligence must therefore determine who is likely  
to support whom. Known friendships, family ties, or presumptive  
obligations resulting from sponsor-protégé relationships in past jobs  
are necessary elements in the analysis. A careful study of public  
remarks may be useful. Which members of the central committee seem  
invariably to echo Zhou En-lai's statements on major issues? Which  
seem to imitate Lin Biao-chi's phrases? The imponderables loom  
large in such an estimate, but the issue is too important to forego  
analysis.

### Military Intelligence

The military posture of a country is so large an ingredient of its strategic stature that even peacetime estimates require extensive analysis of armed forces intelligence. It is an awkward fact, however, that armed forces intelligence in peacetime is, in many respects, more difficult to come by than during war. During peacetime, operational probes, prisoner of war interrogation, aerial reconnaissance, captured equipment often yield prolific data during hostilities. Information passed openly to military attaches and others is an adequate substitute during peace.

A large part of the man-hours expended in a military intelligence organization goes into the pick and shovel work needed to uncover the organization and administration of the foreign military services. The result should be a knowledge of the military structure from the ministry level down through the various levels of territorial and tactical organization. If the information available is fairly complete, the intelligence organization will come up with a reasonably good picture of the relationships among the high commands; the division of the country into corps areas, fleet commands, air commands; the location and function of unit headquarters, depots, airfields, and other installations; numbers and distribution of personnel, weapons, vehicles, and other equipment.

The geographic factors which influence military operations also come within the scope of military intelligence. These are typhoons a menace to amphibious operations. What is the weather the weather pattern of the area? The weather pattern of the area is important in amphibious operations. (The weather pattern, drainage pattern) It has considerable data on the landing beaches, (including tidal data, gradients, underwater obstacles, obstructions) It has information on weather, climate (temperature, precipitation, clouds, fog, humidity, winds) It has data on urban areas (is adequate for estimates of defensibility and vulnerability (street patterns, types of building construction, location of utilities and other vital installations, distribution of population).

The compilation of the aforementioned data will delineate the anatomy, so to speak, of a foreign military establishment in its physical setting. To some extent, this summation of tangible specifics will throw light on the effectiveness of the armed forces. But to round out the picture, attention must also be directed to the intangibles. This necessitates, for example, an evaluation of morale, of training methods and of tactical and strategic doctrines. Methods and doctrines will be considered as they bear on the employment of particular weapons and on the employment, singly and jointly, of the various arms and services.

In the parview of the evaluation will also come practice and principles relating to circumstances, river crossings, guerrilla warfare, airborne operations, surprise attack, and defense.

Intelligence on logistics requires a consideration of tangibles and intangibles combined. Requirements for railroads, fuel, ammunition, medical supplies, and other material must be recognized. Calculations must be made of the number of trains, ships, trucks, aircraft, and other transport units needed to move men and equipment under given circumstances. Requirements must be matched against assets, with appropriate consideration of vulnerability to interdiction.

The "flaps" in military intelligence occur when new activity is disclosed -- movement of troops to frontiers, increase in artillery exchanges between unfriendly forces, transfer of military equipment from one nation to another, testing or introduction of new weapons. As often as not, military intelligence is not competent to make the evaluation alone. A joint consideration with political and other analysts is called for to appraise the full significance of the new activity. The jeopardy to Middle East peace of Communist military shipments to the UAR, for example, is to be assessed in the light of the political as well as military factors operative at the moment.



### Scientific Intelligence

There is some overlap in practice between scientific intelligence and technical intelligence, and it is convenient here to consider both together. Technical intelligence concerns foreign technological developments which have advanced to the point of having a practical application for war purposes. Scientific intelligence covers technological developments also, but only up through the research and development phase. In addition, its scope includes areas of research that transcend the strictly technological and the strictly military, e.g., mathematics, medicine, solid-state physics, enzymology, radio astronomy, oceanography. Technical intelligence is a responsibility of the military services. Scientific intelligence may be collected and analysed by other organizations, e.g., the Atomic Energy Commission.

The growing importance of scientific and technical intelligence hardly needs to be labored in an age when national security is so closely related to advances in nuclear physics, rocketry, electronics, and medicine, to name only several of the fields marked by dramatic breakthroughs in recent years. Even in the nineteenth century, the importance of technical intelligence was widely appreciated. One of the information which Dreyfus was unjustly accused of passing to the Germans dealt with the design of a new artillery recoil mechanism.

The widespread concern over enemy "secret weapons" at the

beginning of World War II gave strong impetus to the expansion of scientific and technical intelligence offices in both the Axis and allied powers. Reports in the files of British intelligence when the war began, for example, indicated German development activities on gliding bombs, pilotless aircraft, long-range guns, rockets. The war was less than a year old when the British became convinced that the Germans had developed radio beams <sup>in</sup> for blind bombing.

The discovery of the beams by the British is illustrative of the manner in which scientific intelligence frequently combines the usual sources of intelligence information (agent reports, overt publications, etc.) with technical means for confirming the information. In this case, the technical means involved the sending up of an RAF search aircraft, which detected the German beams in the expected place and at the expected frequency. German aircraft, with receivers ostensibly designed for blind landings, had been able to fly over the British Isles at night and drop their bombs at the intersection of the beams on preselected targets. After the British uncovered the beams, however, they were able to jam them and confuse the German night bombers.

The spotting of German radar stations again illustrates the combination of technical and traditional methods of intelligence collection. Photo reconnaissance and the radio direction-finding stations while they were

...transmitters, the British could determine general locations by taking radio bearings. Agents were then directed to pinpoint the inland stations, after which further details were obtained by photo reconnaissance. By these methods, British intelligence located more than 740 German radar stations on the continent, leaving not more than six to be uncovered by the ground forces after D-Day.

### Sources of Information

Like the other intelligence categories, scientific and technical intelligence maximizes collection from overt sources. Since the death of Stalin, the number of Russian scientific and technical journals allowed to circulate in the West has expanded. The Library of Congress publishes a "Monthly Index of Russian Accessions," which gives the title of all articles and books received. Specialized bibliographies and indexes are also published by other libraries, e.g., the National Library of Medicine.

The limited Russian language competence in American scientific circles has spurred the initiation of various translation and abstracting programs. The Chemical Abstracts, Excerpta Medica, and the Biological Abstracts are among the best known resumes of Russian articles. For those with some Russian language competence, the abstract journal Referativnyy Zhurnal, published in the USSR, is often a time-saver. Whether used as a supplement to translation

in the overt category remains perhaps the principal source of information on scientific and technical accomplishments abroad.

In the overt category may also be placed information gleaned from public displays of equipment and accomplishments. May Days, for example, frequently provide the occasion for such displays, intended often to impress foreign as well as domestic spectators. From fly-bys of military aircraft, trained observers may be able to determine whether there are unusual design features that would permit of super performance. It may be possible also to determine if the engines are equipped with afterburners and to estimate how much thrust augmentation the afterburners provide. It may also be possible to estimate the weight and unaugmented thrust of the engine.

The covert collection of scientific and technical intelligence is handicapped by the extraordinary secrecy that surrounds the obvious targets of the clandestine services. To aggravate the difficulty, the secret agent who is also a trained scientist (a Klaus Fuchs or a Bruno Pontecorvo) is a rare find. When the combination occurs in one person, he can of course be of outstanding value.

Scientific intelligence is commonly accorded a higher order of credibility if it is acquired by technical methods. For example, one can detect nuclear explosions in the atmosphere up to fairly considerable ranges by acoustic waves. Even smaller explosions in



the means can be detected by hydroacoustic methods. For underground explosions or for explosions in the waters not linked hydroacoustically with the oceans, detection is possible by seismic methods. The analysis of radioactive debris is the advantage of enabling distinction between fission and fusion explosions.

#### Personnel

The scientific intelligence officer is of course himself trained in science. His talents need not run along lines that result in creative contributions to scientific knowledge, but he should be able to appraise the significance of such contributions for national security. He may, in many cases, be able to draw on the consultative services of scientific experts; he will have to talk to them in their language and hold his own with them. At the other end, he will have to translate scientific and technical collection requirements into language understandable to untrained sources. This ability to minimize jargon also stands the intelligence officer in good stead when he presents his conclusions to policy makers and operating officials. It is a talent he needs far more than the political analyst or military intelligence officer, who speaks to policy makers or commanding officers pretty much in their own language. A working solution to the language problem may sometimes be to combine a short intelligence report to the policy maker with a detailed technical

advantages, the scientific intelligence officer may be justified in reporting greater confidence in his own conclusions. An occupational failing of experts -- though they are right more often than not -- is to be heavily influenced by their own particular lines of research when called on to assess possibilities in foreign countries. British experts in World War II, for example, whose experience with practical rockets was then with those burning cordite in a steel case, looked at photographs of a German rocket at Peenemuende and assessed the weight at 80 tons. British scientific intelligence, on the other hand, relying in part on reports from agents and prisoners indicating liquid oxygen to be one of the fuels, came up with the much more accurate estimate of 13 tons.

#### Analysis

Where technical methods of detection are successful, the scientific intelligence officer is greatly assisted in his analysis. Technical detection, however, is often short of being all informative. The analysis of radio-active debris, for example, is subject to considerable error for calculating the exact location of a nuclear explosion. In the majority of such cases, the scientific intelligence officer labors under the standard uncertainties, which will not be resolved by the experimental and laboratory techniques of the natural sciences. He rests his analysis

Other standard sources. He correlates the information received for consistency with other known facts. His conclusions are compounded from imponderables, not the measurables he worked with in his academic training.

The scientific intelligence officer, though he relies heavily on his academic training in the natural sciences, thus finds himself approaching his work in the manner of an investigator in the social sciences. There is indeed no substitute for this approach when the matter under consideration relates to people and institutions. The organization of the Academy of Sciences, the curricula of engineering colleges, the annual graduates from technical schools, the transfers of missile technicians to other localities -- these are subjects which the scientific intelligence officer handles with techniques that are common to intelligence analysis generally.

The very speed of technological advance necessitates ever greater emphasis on scientific intelligence in this century. Scientific intelligence will play a role which is trying enough when the United States and other countries have alike developed new weapons, and American experience can serve as a guide in the analysis of foreign developments. The role will be more difficult when the United States has alone produced a weapon, and it is necessary to prove a negative case. It is likely to be most critical when the United States is still unsuccessful, while a

foreign country has succeeded. For the prevailing image is of American technological supremacy, and widespread skepticism has too often received all but the most incontrovertible facts about foreign levels of achievement. In the ability of scientific intelligence to adduce the facts rests the nation's security against surprise from new technological threats.



### Economic Intelligence

It is the magnitude, structure, and rate of growth of foreign economies as they can contribute to military power -- economic potential for war -- that provides occasions the primary interest in economic intelligence. The decisive influence of American economic superiority in the outcomes of World War I and World War II gave rise to a prevailing thesis that a country's success in war depends above all on its conversion of economic resources to combat power. The all important analysis, in this view, drawn not from intelligence of forces in being, but of the economic mobilization base -- manpower, stockpiles, and productive capacity over and above what must be drawn down for essential civilian requirements.

With the rise of nuclear power, this view has been called into question. As some analysts envisage the probabilities, forces in being must be the primary determinant in deciding the outcome of all-out nuclear conflict; economic potential for sustaining hostilities is irrelevant in a setting where the mobilization base is doomed to quick extinction. Insofar as nuclear capabilities are a deterrent to all-out war, hostilities are envisaged on the Korean pattern, which do not call for the total involvement of the economic mobilization base.



1. Natural resources. Capabilities for the extraction of iron ore, coal, and other essential minerals are a clear limitation on a country's ability to wage war. It is the importance in modern war of a diversified resource base that lends such great advantage to sheer geographic size in the twentieth century. There are no completely self-sufficient modern economies, but the island kingdoms and smaller nations that were the great powers of an earlier era are under particular disadvantages today in having to look outside their borders for so much of their raw material requirements. In addition to mineral resources, the analysis of war potential must consider agricultural resources. Japan's stature as a great power was supported before World War II by her ability to command food imports from Taiwan and the Asian mainland. Her insufficiency of food would be a serious weakness in another war.

Shortages in natural resources can be ameliorated, for a time at least, by stockpiles. Estimates of stockpiles must therefore be included in computations of resource availabilities as matched against requirements. Economic intelligence analyses also give recognition to substitutes in such calculations--synthetic in place of natural rubber, for example, plastics in place of short-

only materials.

3. Manpower. The size of armies is the truest sort of index to military power, but it has served reasonably well as a point of departure in analysis. The smallest countries cannot have large armies for lack of manpower. The economically backward countries cannot have large armies for lack of means to support them. With more than three times the population of the United States in World War II, China put into the field less than half the men mobilized in the American armed forces. It is the large, industrially advanced countries that can mobilize the biggest armies in wartime.

Calculations of manpower availabilities rest first on estimates of the total population, classified by age and sex. Men of military age constitute a crucial component of this estimate. Health characteristics of the population are also considered in determining availability for military service. Labor productivity is a factor in estimating civilian labor force requirements; the lower the productivity, the greater the number that must be kept in the fields and factories. The training and education of the labor force are further factors, which limit both the production and utilization of modern weapons. The calculations invariably allow for additions to the labor force in wartime of women, school children, and retired persons who would normally be outside the labor market.



2. Industrial capacities. War potential estimates

rest in largest part on calculations of specific industrial capacities--steel ingot, machine tools, electronic equipment, airplanes, electric power, shipbuilding, munitions, motor vehicles, and others. Degrees of superiority or inferiority are of course not shown by mere summations of capacities. In their finest detail, estimates will show the proportion of capacity that can be devoted to war production. The fewer the trucks that must go to civilian customers, the more the army can have and the greater the nation's war potential.

The production statistics published by foreign governments are a major source of estimates of industrial capacity. In recent years, the Communist governments have found their propaganda purposes well served by releasing more detailed statistics of economic achievements and of projections under five and seven year plans. Economic intelligence may have to make its own adjustments to these figures, but they serve as starting points in analysis.

On sectors of the economy for which statistics are not released--airplane production for example--economic intelligence must employ more indirect methods. Order of battle and table of equipment information on the air force may provide one basis for an estimate. A listing of known

Estimates with production for each calculated from facts

known about plant size, number of employees, or other information may provide the basis for another estimate. If the differences between estimates are not too large, economic intelligence can settle on an approximation.

4. Transportation. In 1904, an analysis limited to a consideration of resources, manpower, and industrial capacity would have come up with a higher war potential for Russia than for Japan. But Russia was decisively defeated, because she was not able to bring her power to bear in the theater where the contest was decided, the Far East. As this illustration must immediately suggest, comparisons of war potential are meaningful only for given assumptions about the character and locale of the hostilities. China's potential relative to Brazil for a war in the Far East is of one order; for a war in Latin America, it is of quite another order.

Transportation constitutes a critical element in assessing a nation's potential for war in a specific theater. The completion in 1953 by Communist China of a railroad to the Szechwan border considerably enhanced the Viet Nam capabilities against the French. It greatly expanded Germany's position in World War II enabling the United States to fight the war against the Axis powers to the distant, heavily fortified fronts.

8. Trade. Whatever the advantages of commerce to a peacetime economy, trade is a precarious asset in war. Hong Kong's food imports from the Chinese mainland are economically advantageous in peace, a liability when under attack. The economic intelligence officer, however, is not likely to regard a country's trade pattern as one of the most critical factors in its war potential, for patterns of trade are often easily adjusted to political or military necessities. The bulk of Communist Yugoslavia's trade was with the bloc before 1946. After the break with Stalin, the West became Yugoslavia's principal market and source of supply, and the shift entailed no serious disruption to Belgrade's economy. Soviet trade with China was small in the 1940's; with a Communist regime in Peking, the USSR became China's main trading partner.

In the case of some commodities, however, trade patterns can be fairly rigid. The Chinese Communists might reorient most of the country's trade, but they still had to import rubber from outside the bloc. The analysis here may turn on geography: are the lines of supply vulnerable to interdiction in a war situation? Insofar as the United States gets its nickel from Canada and Cuba, the wartime disadvantages may not be serious. Insofar as tin imports must come over long ocean routes from the Far East or South America, the disadvantages may become serious indeed. Trade with nearby, friendly countries is the next best thing to self-sufficiency in wartime. Trade with distant or unfriendly countries may entail heavy costs in convoys and much inconvenience in rationing.

Domestic commerce is subject to much the same analysis as foreign trade patterns. Even in relatively self-sufficient countries, specialization by region is the rule. Concentrations of heavy industry and centers of light industry are separated by varying distances. Certain industrial crops like cotton can be grown only in limited areas. Trade links the regions, determines a country's regional strengths and vulnerabilities, and conditions the country's susceptibility to disruption when subjected to a pattern of military blows.



Finance. Financial analysis has shortcomings for estimating the potential of large, capitalist economies in an all-out war. The economic intelligence officer prefers to make his analysis in real rather than money terms. The assumption is that, by one method or financing or another, industrially advanced countries will command all the economic resources possible when national survival is at stake. The availability of resources, rather than finance, is taken as limiting. This is true also of Communist countries, but here the study of government finances may afford better insights because of so much of the countries' economic activities--the amount of new investment in industries, for example--is reflected in state budgets. Communist budgets thus afford a useful supplement to other areas of study for estimating rates of economic growth and ability to sustain increased military expenditures.

The shortcomings in particular cases of financial analysis under all-out war assumptions may not apply to situations short of all-out war. Where the government has not the strength nor will to commandeer resources and there is strong popular resistance to increased tax burdens or continuing inflationary pressures, the state of the budget becomes a limiting factor on a country's ability to prosecute military hostilities. The strain on the French budget affected the vigor of France's effort to hold its position in Indochina.

Financial analysis is also a useful approach in studying countries which have very little in the way of resources within their borders but must rather procure them through trade or aid from abroad. Jordan's dependence on foreign aid to support its armed forces is readily assessed by a survey of its precarious finances. Saudi Arabia's economic potential for war against her neighbors depends on the weapons and equipment she can buy with her oil revenues.

7. Gross national product. The most inclusive aggregative measure of economic output is the gross national product--the total value of all the goods and services produced by a nation within the year. International comparisons of gross national product as indicators of war potential are useful, but the sophisticated analyst approaches them with several cautions. The figures, for one thing, are stated in monetary value, and even under free convertibility of currencies, it is not readily apparent what dollar values should be assigned to say Bulgaria's gross national product for purposes of war potential analysis. Are Bulgaria's minerals to be valued according to the actual earnings received by Bulgarian barbers? If Bulgarian barbers are as efficient as their American counterparts, the procedure assumes that Bulgaria's output is to be compared with the output of the United States.

Is the overall total or per capita gross national product the more useful concept for war potential analysis? Again there is no ready answer. Insofar as low per capita figures for Asian countries reflect living standards which regimes cannot further depress, the war potential of these countries is clearly limited. But many of the components of gross national product are more significant in aggregates than as per capita averages. It is the number of tanks a country manufactures, not the number of tanks per capita, that provides some measure of its military superiority over its neighbors.

Analysis of gross national product turns as much on its composition as on its total. The total product is made up of military equipment and supplies, capital goods, consumer necessities and luxuries, and entertainment and other services. The country spending the most on military goods and services is ostensibly building up its military strength the fastest. On the other hand, the amount a country is able to spend on entertainment and other luxury consumption is hardly to be ignored; it represents effort that can be diverted to war production after mobilization. It is perhaps the gross national product exclusive of the amount needed for essential civilian requirements that affords the best measure of a country's ability to produce

war goods and services in an emergency situation. The problem is to determine essential civilian requirements. Generally, economies with high gross national products per capita are geared to high civilian requirements. This is not merely because citizens with high living standards resist deprivations that the poor in other countries will countenance. The very structure of advanced economies entails higher allowances for civilian requirements. Where houses, for example, are fairly distant from factories, more gasoline must be set aside for getting people to their jobs than in the case where people live within walking or bicycling distance of their work.

The rate of growth is often an important factor in the consideration of gross national product. Since World War II, the war potential of the USSR has tended to rise with the increase in its gross national product. Countries with high rates of growth commonly have high rates of savings and investment. This means that diversion of resources to the military sector will probably necessitate deep cuts in investment funds, so that the war effort will entail a sacrifice of high priority development programs.



Modern military strategy advances itself only in part as direct destruction of material targets. To rather the economic base of the enemy has become a primary design in the prosecution of war. Long range bombers have to seek out the most lucrative targets in the enemy's rear. Ground forces have turned away from frontal assaults. Naval vessels cut off essential imports. Then, too, economic intelligence is called on to play a central role in support of the military effort.

The importance of economic intelligence in wartime has grown as the technology of war has enhanced capabilities to reach behind the front lines. The airplane brought war to the factories, and economic intelligence has had to supply the most profitable targets. This has necessitated the compilation of target directories--files of factories, refineries and other installations, with the numbers of employees, types of products, and other pertinent information. Varying orders of priority have had to be given the targets, the highest obviously going to those whose destruction would cause the most serious damage to the enemy's war effort. The factors entering into the determination of priorities are several. Are substitutes available? If so, destruction of the plant is not as damaging as it would otherwise be.

Are stockpiles available to be drawn on while a plant is being repaired? Or will foreign sources of supply make up for bomb losses? If so, again the plant is not an obvious target. What is the position of the target in the industrial process? Destruction of a spark plug factory will not ordinarily affect motor vehicle production as directly as would destruction of the auto plant itself. What is the position with respect to excess capacity? Where factories are not fully utilized, increased production in one will readily make up for the destruction of another.

When the wrong targets are bombed, the losses to the enemy may be matched by compensating benefits. The British air bombardment of Hamburg in the summer of 1943 laid waste a third of the city but the industrial plants escaped serious damage. The result was to end a serious labor shortage in the city as store clerks, garage attendants, shopkeepers, and others turned from their bombed out places of employment to the war industries. War production in Hamburg quickly returned to normal.

Apart from its direct support of military operations, economic intelligence in wartime must make its contributions to recurrent strategic estimates designed to inform the nation's top officials how well the enemy is doing, how long he may be expected to hold out, what negotiation appeals

be may be most responsive to. The subjects of economic intelligence here are pretty much the same as those described in the preceding section--manpower, industrial production, stockpile reserves, trade, finance, gross national product. The methods of collection and analysis remain much the same too, although published statistics may be less accessible in wartime. On the other hand, other sources of information e.g. aerial photographs may become more freely available. One of the sources that proved particularly informative in World War II was that of factory markings on captured industrial equipment.

Markings are the nameplates, the inspection stamps, the serial numbers that are stamped or molded on metal or rubber or other materials. Markings analysis may reveal the producers, the time and place of manufacture, operating characteristics, quantities produced, and capacities. In World War II, markings analysis served especially well to correct erroneous estimates of enemy production made by other methods.

By studying the serial numbers and other markings on some 13,000 German tires, economic intelligence officers were able to calculate the number of tires manufactured each month by the major German tire manufacturers. A

the serial numbers on the tires showed the number

on molds that the producers had used, and with a knowledge of the capacity of a single mold, permitted a calculation of each German manufacturer's production capacity. Markings on the tires, which showed the number of rubber used, enabled intelligence officers to determine how the Germans were using their stockpiles of rubber. The calculation of airplane tire production was a key factor in estimating of aircraft production.

Analysis of serial numbers on German tanks revealed that earlier calculations of German tank production were far above the mark. Serial numbers indicated that 1943 production was 4,000, as compared to the 12,000 previously accepted. Markings on gas tanks, fuel tanks, radiators, turret engine, engine wheels, and other components provided additional data to serve as independent checks on the calculations of tank output.

Among the other German products subjected to markings analysis were motor vehicles, guns, ammunition, flying bombs, and rockets. Comparison with official German data which became available after the armistice confirmed the high reliability of estimates derived from markings analysis.



## **Intelligence for Economic Warfare**

Economic pressures on the enemy during war (embargo, preclusive buying, freezing of funds, for example) constitute a standard supplement to military attacks. Economic warfare, in addition, is also applied in situations short of formal war in order to reduce the capabilities of unfriendly nations for aggression.

Economic intelligence has had a close historical relationship to economic warfare. In Britain, the Ministry of Economic Warfare served as the economic intelligence agency at the beginning of World War II. In the United States, the newly created Board of Economic Warfare was charged with responsibility for economic intelligence. Experience has demonstrated the essentiality of accurate economic intelligence in the choice and in the enforcement of economic warfare measures.

1. Shipping controls. Navicerts, ship's warrants, restrictions on the bunkering of vessels are intended to block cargoes (including those leaving for or destined to neutral ports) shipped to or by an unfriendly country. Economic intelligence, often obtained from clandestine sources, is necessary to determine whether cargoes are being shipped on behalf of unfriendly interests. Navy vessels may be signaled to intercept ships on the basis of information provided by economic intelligence.

Blacklists. Merchants in neutral countries suspected to be doing business with unfriendly countries may be blacklisted, in which case exports to them and other business dealings are banned. Economic intelligence is responsible for the compilation of denisux, which give the names of merchant firms, their surfand offices, the actual ownership, connections with other companies, records of suspect transactions, and other pertinent information.

3. Export controls. In war, an embargo is invariably imposed on all shipments to the enemy. In other periods of international tension, export controls are imposed on selected items. Economic intelligence is called on to assist in the selection of products whose export would be to the strategic advantage of unfriendly countries. This may involve a determination of those countries' legitimate civilian requirements, so that operating officials may impose quantitative controls on exports in excess of these requirements.

4. Freezing of funds. When dollar assets of a foreign country are frozen, American banks are directed to permit no transactions in accounts owned by that country or its nationals. Economic intelligence may provide information to show that certain firms have a beneficial interest in accounts apparently owned by others. Swiss businessmen, operating in behalf of

Germans, were the ostensible owners of sizeable American dollar accounts in World War VI.

5. Sequestration of property. Enemy nations may seek to cloak their ownership of properties, activities, and other assets abroad. Again, economic intelligence may give information showing the true ownership of these assets.

6. Preclusive buying. This operation involves the purchase of items for the sole purpose of preventing their procurement by the enemy. The decision to undertake this expensive operation depends on a determination by economic intelligence that the product is in short supply and is extremely vital for enemy war production. Preclusive buying of wolfram and ball bearings limited the availability of these products to the Germans in World War II.

### Economic Intelligence in the Cold War

The Soviet challenge to the West, Nikita Khrushchev avers, is not military. The superiority of the USSR will be rather demonstrated, he claims, as it eventually surpasses the West in economic achievement. The contest is in the economic arena; the world will be won by the system with the best production records. There is sufficient plausibility in the argument to stimulate the keenest interest of American policy makers in Communist economies quite apart from any implication for military hostilities.

The elements that enter into a purely economic challenge are much the same elements considered in the section on war potential--manpower, outputs of specific industries, trade, finance, gross national product, and other measures of achievement. But the lines of analysis may take new directions. Rates of growth assume unusual importance, since the Communist challenge of the cold war is the challenge to "catch up." Changes in the composition of gross national product that reflect increases in the proportion of any residential construction (and promote domestic expectations of rising living standards) take on the aspect of pressure on the East in the cold war competition, whatever its significance for war potential analysis.

Economics in the cold war extends beyond the domestic scene, and economic intelligence follows with particular interest Communist economic appeals to other countries. Trade agreements have their implications for national security interests; Peiping views its trade pacts with free world countries as opening wedges in its drive to win broader international recognition and eventual UN membership. Aid agreements have their political aspect. Economic intelligence and political intelligence working together will assess the effects of Communist loans and grants on the bloc's position in the underdeveloped areas of Asia and Africa.



The economic effects of American foreign policies are also the concern of economic intelligence. Is American foreign aid to non-Communist governments truly conducive to economic development, or is it doing nothing better than just maintaining low living standards? Is it inspiring a growth momentum that will make the recipient country independent of American economic support in the foreseeable future?

These are the questions that economic intelligence intelligence in its many analyses is doing its national estimation and other studies and is the day to the foreign intelligence reporting. Its eye is, of course, always looking for the menace of hostilities. Economic indicators of possible hostilities like withdrawal of foreign funds, possible default servicing. But economic intelligence is far from neglected. But economic intelligence is also alert to the economic stature of the bloc as a challenge quite independent of the military threat. As this stature looms larger, economic intelligence plays an increasingly vital role in keeping the nation's top officials informed of the underlying forces that will decide the contest between East and West.

V

## INTELLIGENCE IN THE SPACE AGE

National Intelligence in the United States today represents the coordinated views of the intelligence community. Despite the necessity of production on an <sup>and coordination</sup> interdepartmental level, national intelligence is being prepared with remarkable despatch. Moreover, the experience of the community with this <sup>and coordination</sup> intelligence machinery which can react to crisis situations faster than ever before in American history. The procedures for achieving consensus, nevertheless, do involve some minimum of personal discussions and group verbalization of issues. The human touch is unavoidable and places finite bounds on the speed with which national intelligence can be prepared. Is this speed adequate to the needs of an age which is obsessed with the dangers of surprise attack by weapons that may be delivered within minutes of their launching?

The answer requires a clarification of the relation between early warning and the intelligence process. The Watch Committee and National Indications Center may apprise the President of signs suggesting preparations to launch missiles against the United States. But when the missiles have left their pads, the responsibility rests on early warning operations of the military services, with their paraphernalia of DEW and SAGE, their complex of radars, computers, and other

electronic mechanisms for around-the-clock surveillance of the air spaces. On the basis of early warning data, air defense and other decisions will be made in minutes or less. Major decisions like the directions to air defense installations will be part of the electronic data process itself. At this critical stage, the conventional national intelligence machinery is by-passed.

The more pertinent question for the space age, therefore, may relate less to the speed of national intelligence production than of early warning operations. Levels of scientific achievement in detection devices are clearly of key importance here. Television, radar, infra red detection, surveillance by space satellites, and computations by high speed computers -- rather than human observation and analysis -- will yield both the source data and final conclusions of early warning.

The critical importance of the air defense and other early warning systems acknowledged, national intelligence must still measure up to its own responsibilities in the space age, when the accuracy of its estimates is more closely bound than ever with the issue of national survival. In the unending quest for greater accuracy, the intelligence community is bound to modify its techniques of collection and analysis to incorporate the latest technological developments. Some beginnings



Thousands of manhours will be saved in the intelligence community when machine translation becomes operational, to the point eventually of small size. Machines and audible translation. The use of computers for gaming -- measuring mathematically the optimum strategies open to a foreign nation -- is a foreseeable development. The value of the conclusions will of course depend on the data with which the intelligence community works. It can set up a model of a real system and test the behavior of the system under a variety of prescribed conditions; but the exercise is of intelligence value only insofar as the model approaches reality.

The areas of intelligence interest today -- foreign policy, military developments, personalities, economic conditions, scientific achievements, for example -- seem broadly representative of the probable subject content of intelligence in the space age. The relative weights of each subject will of course vary with the demands of the day; military intelligence takes on additional importance in the event of hot war; economic intelligence remains in high demand if economic achievement continues to be vital to national strength in military struggle and to national prestige in cold war competition. Increasing consideration of scientific intelligence in national estimates is a certain prospect in an age when technological breakthroughs by one side may become the all-important factor affecting the balance of forces in the world.



of intelligence collection and analysis will probably be increasingly weighted in favor of technical methods. Earth satellites equipped with TV cameras and other instruments, for example, should be able to distinguish the clouds caused by nuclear explosion, should in fact enlarge many times the amount of economic and military intelligence that can be uncovered by present-day methods of aerial photography. These developments, however, are hardly likely to eliminate or even diminish the importance of the human collector and analyst. Photos of factories do not tell all that goes on under the roofs of the factories. The course of political rivalries, the attitudes of peasants, the decisions of party councils -- these are areas of intelligence interest where traditional collection methods should continue to be profitable.

Apart from the assistance that technological devices will afford, the space age is likely to introduce new concepts and methodology to collection and analysis. Target analysis studies of individual industrial plants, for example have limited applicability in situations where devastation of vast areas by bombing and fallout is postulated. A regional rather than plant approach might be the more logical line of activity analysis.

Intelligence will continue to profit of course, from the origination of concepts and methods in other disciplines. The concept of gross national product, developed as a tool of economic analysis, has been adapted in recent years to the needs of economic intelligence. Tabulations of the inter-industry and inter-regional flows of goods and services have been more difficult to compile in the absence of necessary statistics. As such tabulations are developed in coming years for the United States and other economies, it may be possible to draw on them for parameters that can be applied to the study of Communist countries. The progress of academic research in the social and natural sciences will always contribute to the insights of national intelligence.

The need for these insights assures a continuing role for national intelligence in a space age of increasing complexities and multiplying uncertainties. With the continuing growth of knowledge, intelligence errors are inevitable. The best to be hoped for is that errors will be embarrassing rather than disastrous. The design of the machinery, process, and concepts of national intelligence described in the foregoing pages is to minimize the errors and, above all, to be right when it is most important to be right.



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